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NOTES ON THE GRAMMAR OF EARLY BRONZE DÉCOR

BY

BERNHARD KARLGREN

The ornamentation on early Chinese bronzes has been assiduously studied by many authors during the last decades and its principal elements have been determined and analysed. They have been examined both from the point of view of their significance, symbolical and magical — here the results have been meagre and exceedingly uncertain since the earliest texts which could furnish the key to their interpretation are many centuries posterior to the exuberant Yin décor — and from that of their formation. The present article is in the main an investigation of certain form principles in the representation of some dominant décor themes and only incidentally touches upon the vexed questions of their symbolical meaning. It has, in fact, a very limited and modest scope: to guide the student who would learn something about the bewilderingly varied décor themes and help him to analyse and recognize details which at first sight may seem to be wholly arbitrary and capricious but which, after all, are standardized and stereotyped modes of expression.

The great majority of the early Chinese bronzes (Yin and Early Chou) have a background (bottom) plane covered with a spiral pattern, against which the principal décor stands out in relief, sometimes quite high and ridged or rounded, sometimes very flat, low and discreet, rising almost imperceptibly over the background plane.

The spiral pattern of the ground has often been called *lei-wen* »thunder pattern«, a term invented by the Sung catalogue writers who found a slight similarity between this pattern and certain archaic forms for the graph *lei* 'thunder'. Needless to say, there is not the slightest foundation for this speculation, and the word *lei-wen* (still used for instance by Jung Keng in *Shang Chou yi k'i*) should be eliminated from our terminology.

The spiral pattern is varied in many ways. The spiral may be simple, one single volute, e. g. in our Fig. 1 (= Shierkia, K'i 18), the small spirals to the left of the T'aot'ie's ear, or multiple, the spiral line running on in a number of turns, as in the same Fig. 1, above the T'aot'ie's forehead shield. It may be rounded as in our Fig. 1 or squared as in our Fig. 2 (= Röhsska Konstslojdmuseet,

Årstryck 1949). It is not very common, however, for a spiral to figure alone; this is mainly the case when the space to be filled allows no room for a more elaborate filling, e. g. rounded in our Fig. 1, inside the tail curve of the vertical dragon, and squared in our Fig. 2, same place. Spirals are mostly combined into greater units and then form various combinations, the configuration largely depending upon the form of the surface to be filled in. We shall, however, study here three important compound-spiral figures which have this in common that they are not restricted to the background (bottom) pattern but have been promoted from there to figure in the principal décor as well¹).

It is essential to observe from the very outset that we have to operate with the contrast between positive and negative pattern: sometimes the pattern (positive) is formed by the narrow, threadlike relief lines which rise from the bottom, sometimes the pattern (negative) is formed by the bottom space left between such threads, a narrow space which often gives the impression of being a score or an incised line. And sometimes, again, they are certainly meant to be complementary, the artist intending that there shall be two simultaneous patterns.

The first and most important compound-spiral figure to be studied here is the »C spiral». When squared, as *passim* in our Fig. 2, it is quite unadorned: Fig. 3 a. When rounded, it can likewise be quite plain (Fig. 3 b); such we find it in Pl. 1 a (Kahn collection), principal surface, bottom corners. But otherwise and far more often, it is adorned with small »tufts», diagonally placed, as shown in Fig. 3 c; (for a good picture of this shape see Fig. 2, dragon body behind the eye, though here it is not a part of the ground pattern). Furthermore, the roundness of the two spirals is often somewhat distorted by the tufts' being drawn-in, as it were, in the figure, this latter being thus given protruding corners instead of tufts (Fig. 3 d).

In the background pattern the rounded variety of the C spiral is not very common as positive pattern; yet we sometimes come across it, for instance (besides in the already adduced Pl. 1 a) our Pl. 1 b (= Ecke 1), just above the hook of the forehead shield. As negative pattern in the background the rounded C-spiral is a common, indeed a standard element. In Fig. 1, upper border, we find a whole series of examples (here white = negative bottom pattern); these are fairly well advanced towards type 3 d. But in our Pl. 1 c (= Waterbury 7), just above the shoulder of the leg (black line = bottom score), it is more typical 3 c. Squared (3 a) we have the C spiral (here inverted) in our Pl. 1 d (Calmann collection), to the left of the curled tail of the dragon (black score); the squared variant is in fact exceedingly common, even more so than the rounded. A most bizarre example is Pl. 2 a (= Freer 13) in which the background to the right of the spout has rounded C spirals (negative pattern, bottom scores, black in the

¹) This phenomenon recurs, for instance, on the Huai style mirrors, where from a geometrical ground pattern, the »Interlocked T's», the T figure has been detached and applied as one of the salient features of the principal décor, see BMFEA 13, p. 54.

photograph) and to the left of the spout squared ones (again sunk lines, black in the picture). All these examples of the squared C spiral cited here are in negative pattern; but we find it frequently also as positive pattern, e. g. Fig. 2, furthest down to the right (white = raised, positive pattern).

The second compound-spiral figure in the background to be studied here, the »T spiral«, is really a product of the preceding, the two being complementary. In the rounded variety this can easily be seen in Fig. 1, upper border. As already mentioned, the white lines (bottom pattern) form the C spiral, and then quite automatically the thin raised lines which delimit these C's will form a positive T spiral (Fig. 4).

If in the rounded variant the »tuft« of the C on the side of the T stem (type 3 d) is sufficiently pronounced, it will entail that the base of the T stem becomes somewhat slanting (Fig. 4 c).

Rounded, we find this T spiral, as positive background pattern, besides in the already adduced Fig. 1 (upper border), in Pl. 2 a, for instance, to the right of the spout (the white lines in the photograph), and in hundreds of bronze backgrounds, this being the positive complement to the exceedingly frequent C spiral as negative (bottom) pattern. Squared we have it as positive pattern in Pl. 1 d to the left of the tail curve (white lines in the photograph) and *passim* in innumerable other cases.

It is not uncommon to find an alternation between C spiral positive (with T spiral negative) and C spiral negative (with T spiral positive) in one and the same background pattern. Thus we have it, for instance, in Fig. 2 (lower figure): above the dragon's horn there are two C spirals in negative pattern, black lines in the photograph (white lines being T spirals positive); below the dragon's tail there are two C spirals in positive pattern, white lines in the photograph (black lines being inverted T spirals negative).

The third compound-spiral figure in the background to be examined here is the »S spiral«. This spiral, when squared, is always unadorned (Fig. 5 a), e. g. Fig. 2, in front of the horn and face of the lower dragon; when rounded, it is sometimes unadorned (5 b) as in Pl. 2 b (= Freer 17) (above the tail and horn in the lower right section), sometimes it has »tufts« (5 c), and these may be drawn into the picture as in 5 d. Thus the parallelism with the C spiral above is in this respect complete. For rounded background examples see Pl. 1 b, above the T'aot'ie's horn (the negative bottom pattern, showing black in the photograph), and Fig. 1, to the left of the T'aot'ie's ear (the negative bottom pattern, showing white in the rubbing). From these two examples it is readily seen that the positive pattern which results as a complementary pattern of the negative S spiral will consist of pairs of hooks, issuing from opposite sides and standing back to back, each pair separated from the next by a cross line (Fig. 5 e). The S spiral in the background is mostly negative, as in the examples quoted; but it does occur as positive pattern, e. g. in Pl. 2 b, below the body of the top left-hand dragon (white line in the photograph).

Though the background spiral patterns show many variations, the above remarks have indicated the principal rules of their grammar. The preponderant figures are everywhere the »C, T and S spirals» (squared or rounded, positive or negative), and their importance is enhanced by the fact, already stated, that they have all been promoted to play a part in the principal décor as well.

In the first place, they have then a subordinate role, reminiscent of their original background function: they can serve as a filling in the surfaces of the principal décor figures in relief. The squared spirals are very rare in this function, but they do sometimes occur; see, for instance, our Pl. 3 a (= Seikwa 54), where we have C and T spirals (negative-positive) as filling of the horn of a dragon. Infinitely more common are the rounded spirals, and it is a favourite trick to have rounded spirals as a filling of the décor figures contrasting with squared spirals as background pattern (Pl. 3 b = Freer 9). Least common as figure-filling is the S spiral, but occasionally it crops up, e. g. in Pl. 2 b, the neckbelt dragon to the left; here in a sunk line. The C spiral, on the contrary, is so exceedingly common in this function as to be practically ubiquitous.

These rounded C spirals, as a rule executed in sunk lines, can either decorate the relief surface in question very sparingly, as in our Fig. 2 (on both dragons, behind the eyes), or crowd the surface so densely that it forms a very weak contrast to the background: Pl. 3 b. It is not only animal figures which can be filled in this way. The hanging blades in Pl. 1 d have the same filling: if we draw a vertical line through the centre of the blade, we have in each half a vertically placed C spiral in negative pattern (sunk lines, black in the photograph), with the »tufts» visible, and as positive complement the T spiral, with the stem here horizontally placed, and slightly slanting, in the regular fashion.

Not less important is the part which these compound spirals play as independent figures in the principal décor.

Here, too, the S spiral is least common. Cases like our Pl. 3 c (= BMFEA 20: 5), where the T'aot'ie's horn is S-shaped, are rare. More common is a band (belt) in which the décor is a row of S-spirals, mostly as negative (sunk) pattern. We have it in our Pl. 3 a, and our Fig. 6 (from a Kuei, Wuying 61), gives a good idea both of the negative S pattern and of the resultant positive pattern of interlocked hooks. This pattern is, in fact, fairly frequent.

The independent C spiral is much more important. The horn of a T'aot'ie often shaped after this cliché, for instance our Pl. 3 d (Ting in MFEA). It recurs in our Pl. 3 a (= Senoku 20), middle section of a Tsun, where the standing C Spiral is not the horn but an independent ornament on the forehead. Again, we have it in our Fig. 7 (= Sung sü 41), where it forms part of a bird (detached tail). In Pl. 3 a it forms the ear of the dragon. The exemples could easily be multiplied.

It is common for a row of C spirals to fill a band or belt as its principal décor.

A good example is Pl. 2 a, foot belt. It is then frequently combined with a T spiral to form negative-positive patterns. As such we find it in the foot belt of Pl. 1 a: C spiral negative: T spiral positive (observe that in the background pattern on the same vessel, principal surface, lower corners, we find just the opposite: C positive: T negative); and we have it, beautifully executed, in Pl. 4 a (= Senoku zoku 192), a stand on which the positive T spirals have their typical, slanting stem.

Again there is an important application of the C spiral in belts where the C's are interlocking. We already had this motif as a filling in Pl. 1 c, but it is frequently an independent principal theme in a belt, e. g. Pl. 4 b, foot belt of a Lei, and our Fig. 8 (= Ecke 14, foot belt of a Chi). Here one C sometimes grips over the spirals of two other C's. A simpler scheme, with only two C's interlocking, we find in Fig. 9 (Crown Prince p. 11, chariot mounting from An-yang).

Finally, the T spiral appears as principal décor element (besides in the cases just mentioned where it is a complement to the C spirals, Pls. 1 a and 4 a), in several positions. It occurs very frequently as the horn of a T'aot'ie, as in our Pl. 1 d (with the typical slanting stem caused by the «tufts» of the complementary negative C spiral) and in our Fig. 10 (= Wuying 42; here the stem is straighter). This curious T shape in the representation of a horn would indeed not be understandable without the preceding study of the spiral patterns. An even more eccentric use of the T spiral is its placing as the tail of an elephant, Fig. 11 (= Shierkia, Hia 2, stand of a Kuei). A particularly interesting chapter is the formation of the jaw line of certain T'aot'ie; we can follow it step by step: a simple curve, Fig. 12 a (= Yechung II shang 38); a curve with the jaw joint emphasized by a curl, Fig. 12 b (our Pl. 4 a); this curl detached, Fig. 12 c (Pl. 4 c = Waterbury 12, neck belt); the curl balancing more evenly the curve, Fig. 12 d (Pl. 1 a, Pl. 1 d); and, finally, frankly a regular T spiral, Fig. 12 e (Pl. 4 d = Waterbury 9, neck belt).

The T spiral can furthermore serve as the principal filling of a décor belt, and we have, for instance, coupled T's in Pl. 4 e (= Seikwa 30).

After this preliminary survey of the background patterns and their influence on the principal décor, we shall leave the former and concentrate upon the latter.

Our point of departure will be the dragon. There is a great variety of forms representing the dragon and a number of different principal types are easily recognizable. In my earlier works, particularly in *New Studies on Chinese Bronzes* (BMFEA 9, p. 14), I have made a rough classification of them: jawed dragon, trunked dragon, beaked dragon, turning dragon, feathered dragon, winged dragon, S dragon. Moreover, the «jawed dragon» might suitably be subdivided into «jawed dragon» (with an upward-turning lower jaw) and «gaping dragon» (with downward-turning lower jaw). In our present investigation, however, we shall take less notice of these — in themselves important — distinctions, and concentrate upon another side of the dragon representation: the lower part of the dragon body, since, as we shall see, this will give us the key to many apparently enigmatic décor elements.

In accordance with this plan, we list here, as a mere preliminary, some examples of each of the above-mentioned principal types, and we shall not repeat these distinctions in the following discussion, though in each category the variants are to a large extent grouped together in consequence of them; once these principal types have been pointed out, the reader can easily recognize them without their being expressly defined in each specific case.

Jawed dragons: Figs. 51, 63, 65;
 Gaping dragons: Figs. 15, 24, 36, 42, 49, 85;
 Trunked dragons: Figs. 38, 54, 56, 75, 81;
 Beaked dragons: Figs. 77, 155, 165, 169;
 Turning dragons: Figs. 39, 87, 90, 98, 108;
 Feathered dragons: Figs. 91, 117, 119, 249;
 Winged dragons: Figs. 165, 167, 171, 204;
 S dragons: Figs. 539, 542, 548, 550.

One more salient feature of the dragons may be briefly disposed of in some preliminary remarks: the horn. A glance at our Figs. 16 and following will show that in the great majority of cases the horn belongs to one or other of the following principal categories:

a) »Bottle horn«, the shape being that of a bottle, in some variants perhaps even more reminiscent of a mushroom. For the significance of this shape, cf. BMFEA 14, p. 65. Examples: Figs. 18, 44, 49, 60, 64, 90, 146, 180.

b) »C horn«, the shape being that of a C (cf. the background patterns discussed above) recumbent or standing, e. g. Figs. 71, 126, 133, 145, 150, 158.

c) »Comma horn«, the shape being that of a comma, placed at various angles to the head, e. g. Figs. 38, 46—48, 52, 59, 66, 67, 72, 83, 154. Observe that there are sometimes hybrid forms between a. and c.: the »bottle« shape is somewhat distorted so as to become asymmetrical and approach the shape of the Comma, e. g. Figs. 140, 142.

d) »S horn«, e. g. Figs. 93, 97, 100, 159.

e) »T horn«, e. g. Figs. 21, 40, 120.

f) »Leaf horn«, the form being that of a heart-shaped leaf, e. g. Figs. 16, 28, 30, 50, 61, 69, 75, 151, 157. It might seem questionable whether these latter really are horns and not ears, since the ear of a T'aot'ie is often represented precisely in this fashion, e. g. Fig. 294, but this is indeed no obstacle to its being a horn here; it is merely one more example of the constant tendency to fall into conventional clichés, this figure serving both for ears and for certain types of horns. Indeed, the placing on the head is exactly the same as that of the Bottle horn, and moreover there is a decisive proof that a horn, not an ear, is intended in some such cases: we have many examples of this »Leaf horn« being inscribed on the lower part of a Bottle horn, e. g. Fig. 209 (= Waterbury 44) — here it is quite obvious that it is a question not of an ear, but of a horn.

These different principal types of horn having once been described here, they will not be specifically recorded in the sequel.

We now turn to the special theme mentioned above, which deserves close investigation: the representation of the lower of the dragon's body.

Before going into this analysis, it is practical to record a series of formulas, stereotyped clichés, which recur in scores of cases, and to give them certain names. These terms may appear clumsy and somewhat curious at first sight, and we may be accused of an almost German predilection for systematization. But the reader will soon realize that through this procedure many repetitions and verbose descriptions can be avoided; in the sequel, wherever these names are used, they will be indicated as technical terms through capital letters for the initials. The first three, the «C spiral», the «T spiral» and the «S spiral» have already been discussed above. Besides those we observe (Fig. 13 A—N) the following stereotyped conventional clichés, which will be discussed in detail below:

- A. Forward-hooked quill;
- B. Forward-hooked curve;
- C. Backward-hooked quill;
- D. Backward-hooked curve;
- E. C-hooked quill;
- F. C-hooked curve;
- G. Double-hooked quill;
- H. Double-hooked curve;
- I. C-and-double-hooked quill;
- K. C-and-double-hooked curve;
- L. Comma-bottomed hooked quill;
- M. Comma-bottomed hooked curve;
- N. S-bottomed hooked quill.

We start with the dragon which has no leg or lower tuft of any kind.

Figs. 14—35.

Fig. 14, a Li-ting, Malmö Museum; Fig. 15 = Yechung I, shang 21; Fig. 16 = Seikwa 34; Fig. 17 and Pl. 9 = Freer 16; Fig. 18 and Pl. 9 = Waterbury 10; Fig. 19 = Yechung III, shang 13; Fig. 20, a «Kuang» from Anyang, Photogr.; Fig. 21 and Pl. 9 = BMFEA 9: 6; Fig. 22 = Sung, sü 2; Fig. 23 = Wuying 63; Fig. 24 = Hentze XLIV; Fig. 25, a Tsun, Cleveland Mus., photogr.; Fig. 26 and Pl. 9 = Hakkaku 20; Fig. 27 = Waterbury 4; Fig. 28 = Antiques 21; Fig. 29 and Pl. 2 a = Freer 13; Fig. 30 = Yechung III, shang 23; Fig. 31 and Pl. 9 = Shukan 16; Fig. 32 = Yechung II, shang 12; Fig. 33 = Freer 20; Fig. 34 and Pl. 9 = Seikwa 46; Fig. 35 and Pl. 9 = Senoku 40.

In Fig. 14, the tail rises in a simple curve; it is far more common, however, as in Figs. 15—23, for the body and curved-up tail to form a stiffly broken S line. In

Fig. 24 this S line is more softly undulating. In Figs. 25—27 the body is straighter, with only a slight upward-turn at the end; Fig. 28 has not even that turn. Figs. 29—34 show the tail bent downwards, Fig. 35 the same but with an upward bend first. — Figs. 29 and 30 are independent dragon figures, Figs. 31 and 32 form the horns of T'aot'ie, 33 and 34 are inscribed in T'aot'ie horns. — In Fig. 26 the curve of the jaw has been deplaced so far to the rear that it almost gives the impression of being a tuft of the type belonging to the cliché Forward-hooked quill, but that is really an illusion. — Some of these dragons have extra adornments: Figs. 21 and 22 have a C-hooked quill on the head, and Fig. 22 moreover a Forward-hooked quill on the forehead. Fig. 23 has a very bizarre adornment on the nose. Figs. 26—28 and 35 have, on top of the body, tufts which form a Forward-hooked quill (Figs. 26, 35) or C-hooked quill (Fig. 27) or Double-hooked quill (Fig. 28). The origin and meaning of these configurations will be discussed later.

Figs. 36—44.

Fig. 36, a Ting, fotogr.; Fig. 37 = Wuying 141; Fig. 38 = Yechung III, shang 29; Fig. 39 = Cull pl. III; Fig. 40 = Yenku, shang 16; Fig. 41 = Hentze LIX; Fig. 42 and Pl. 9 = BMFEA 20: 24; Fig. 43 and Pl. 9 = Pl. 30, a square Ting, Kahn coll., fotogr.; Fig. 44 = Senoku 68.

A tuft bent backwards, as in Figs. 36—40 and placed behind the jaw (Figs. 36—38), or, if the dragon's head is turned, below the neck (Figs. 39, 40) achieves the cliché Backward-hooked quill (Fig. 36) or the cliché Backward-hooked curve (37—40); in the latter case the body may curve in downwards direct (Figs. 37—38) or it may first make a bold upward turn and then descend (Figs. 39, 40). — In contrast to these types, our Figs. 41—44 show the Forward-hooked curve. Fig. 41 is practically identical with the preceding Fig. 40, the only difference being the direction of the tuft or hook. The following (Figs. 42—44), however, are more important. Their cliché: one hook branching off in one direction somewhat before the principal body curls up in the opposite direction, was later on revived in the Huai style and became one of its most favoured themes. — Fig. 40 has several embellishments: behind the T horn, on the nape of the neck the dragon has a plume in the shape of the C figure, and on the top of the head two tufts which together with the beak form the cliché C-hooked curve. Fig. 43 has on the head a Forward-hooked quill. Fig. 44 is particularly interesting; behind the horn there rises a long curving band which is, in fact, a second body having for its head the same head as that of the principal dragon. If we turn the picture on its side and disregard the principal dragon body, we find that with the tuft and the curved tail to the left we have an additional dragon of quite the same type as Fig. 37. This trick: one head serving for two different dragons, is quite common, as we shall see below (observe however the curious horn of Fig. 37: the T-spiral horn embellished with a secondary T).

Figs. 45—60.

Fig. 45 and Pl. 9 = Sirén I: 33; Fig. 46 and Pl. 9 = Freer 17; Fig. 47 = Palmgren 93; Fig. 48 and Pl. 9, a Yi in Wessén coll., fotogr.; Fig. 49 and Pl. 9 = Seikwa 31; Fig. 50 = Seikwa 104; Fig. 51 = Waterbury 6; Fig. 52 and Pl. 9, a Li-ting, Oeder coll., fotogr.; Fig. 53 = Seikwa 58; Fig. 54 = Antiques 9; Fig. 55 = Ecke 10; Fig. 56 and Pl. 9 = Waterbury 73; Fig. 57 = Tsun 1: 26; Fig. 58 = Senoku 27; Fig. 59 = Ecke 6; Fig. 60, a Chī, C. T. Loo coll., fotogr.; Fig. 61 = Ackerman 59.

In this group we can study one of the most frequently used stereotyped formulas: the cliché »C-hooked quill». There is a bladelike body, from the under side of which two confronting tufts or hook-like excrescences descend (one backward-pointing and one forward-pointing, thus achieving the C formula). The untrained eye is prone to mistake these tufts for two legs, but a comparison with Figs. 161—171 below, where there are both a leg and these same tufts, shows that this is not correct. Indeed, the tufts serve to mark off the beginning and end of the trunk proper against the head on the one hand, the tail on the other. This can be seen for instance in Pl. 2 b or Pl. 9: 56, where there is a continuous sweeping line from the top of the dragon's back, running across its trunk and ending in the descending tuft. The front hook is sometimes attached to the back of the jaw, sometimes it is placed free slightly behind the jaw. The »blade» of the tail may be simply a straight band with strictly parallel borders, though ending in a point (as in Fig. 49), or it may have a more knife-blade-like widening (as in Fig. 57). We have termed this figure (the two tufts and the blade-like end) a »C-hooked quill», because the drawn-out and pointed end of the body is undoubtedly meant to depict a quill or plume, as is proved by numerous parallels, with both this C-hooked quill and the simpler Forward-hooked quill (as in Fig. 35) in the representation of the tails of birds (very common).

The curious fact that this quill is asymmetrical (facing towards one side) is easily accounted for. Just as the dragons further below have only one leg, because they are seen in profile, so here we see only one of two tail quills, the other one being hidden behind the visible one. Only very rarely are they both drawn, forming a symmetrical pair, as in Fig. 47, and each of those two is asymmetrical in itself, its onesidedness balancing the onesidedness, in the opposite direction, of the other: together they form a bird's spreading tail with two plumes.

Figs. 62—86.

Fig. 62 and Pl. 9 = Waterbury 46; Fig. 63 = Seikwa 91; Fig. 64 and Pl. 9 = Chungsung, shang 10; Fig. 65 = Seikwa 108; Fig. 66 and Pl. 9 = Wuying 54; Fig. 67 = Yechung I, hia 9; Fig. 68 = Senoku 26; Fig. 69 = Yechung II, shang 12; Fig. 70 = Yechung III, shang 21; Fig. 71 = Palmgren 95; Fig. 72, a Yi, fotogr. (Wessén coll.); Fig. 73, a Ku, fotogr. (Hardt coll.); Fig. 74 = Wuying 50; Fig. 75 and Pl. 9 = Senoku 3; Fig. 76 = BMFEA 20: 2; Fig. 77 = Visser p. 103; Fig. 78 and Pl. 10 = Seikwa 47; Fig. 79 = Wuying 50; Fig. 80 = Ku kung 18; Fig. 81 = Umehara: Henkin XVIII; Fig. 82 = Seikwa 43; Fig. 83 and Pl. 10 = Shierkia, Chu 4; Fig. 84 = BMFEA 20: 25; Fig. 85 and Pl. 10 = Antiques 46; Fig. 86 = Seikwa 129.

Type 62—64 is closely akin to the preceding group with C-hooked quill. In the present group the end of the dragon turns up decidedly, and we have therefore preferred here the term »C-hooked curve». In Figs. 65—86 the upward bend is much stronger, the tail being sometimes almost rolled in. The tufts under the body, however, are exactly the same as in the preceding category. In Figs. 62—79 the dragon's body is straight, in 80, 81 it has an angular bend, and in Figs. 82—86 it has together with the tail the same smoothly undulating shape as in Fig. 24 in a preceding category. Whereas many of our dragons here have no embellishment on the top of the nose, others have rising tufts of the same shape as those below the body: either bending forward, as in Figs. 66, 70, 78, or bending backward, as in Figs. 65, 69, 71, 77, 82, 83; together with the nose line they then achieve configurations which more or less coincide with the current clichés Backward-hooked quill or curve, Forward-hooked quill or curve. Indeed, in Figs. 79 and 81 we even have two confronting tufts, as in the cliché C-hooked quill hanging down from the curled-up tail; Fig. 80: Backward-hooked quill both on the head and the back; Fig. 85: tongue shaped like two Forward-hooked quills, combined so as to form a cicada figure, a theme to which we shall revert presently. Moreover Figs. 85 and 86 have, in the spaces around the dragons, independent filling-out figures: C-hooked quill (85, below), S-bottomed hooked quill (85 above, 86 below and above), and circles filled with a central »stud» surrounded by a row of studs — a prehistoric décor theme carried over to the Yin art, see BMFEA 17, p. 104.

Figs. 87—103.

Fig. 87 = Seikwa 73; Fig. 88 = Seikwa 107; Fig. 89 and Pl. 10 = Yechung III, shang 29; Fig. 90 = Senoku 30; Fig. 91 = Sung, Sü 3; Fig. 92 = Yechung III, shang 29; Fig. 93 and Pl. 10 = Seikwa 147; Fig. 94 = Seikwa 31; Fig. 95, a Yu, fotogr. (Ill. cat. I: 62); Fig. 95a, a Yu (C. T. Loo fotogr.); Fig. 96, a Hu, C. T. Loo coll., fotogr.; Fig. 97 = Seikwa 128; Fig. 98 and Pl. 10 = Seikwa 93; Fig. 99 = Chengsung, shang 15; Fig. 100 = Wuying 69; Fig. 101 and Pl. 10 = Seikwa 116; Fig. 102 and Pl. 10 = Seikwa 110; Fig. 103 = Palmgren 93.

In this and the following category we have brought together a number of head-turning dragons, all of which have this in common that their lower line forms either the cliché C-hooked curve or the cliché C-hooked quill. In Figs. 87—96 the tail is raised high, in Figs. 97—104 it is not. In the former group there are frequently tufts also along the back of the tail, thus converting the upper contour as well into the cliché C-hooked curve (Figs 88—90, 92—95; Fig. 92 has the same cliché on top of the head; Fig. 96 has only one tuft on the tail) — Figs. 92—96 are very closely akin to Figs. 88—90, but have, in addition to the »C hooks», extra tufts on or just below the neck (in Figs. 95 and 95a elaborated into a Forward-hooked quill); Fig. 96 has a curious quill hooked both upwards and downwards attached just at the back of the hind tuft. Figs. 90, 91, 94 have Forward-hooked quills on top of the body. — In the second group, there are likewise often one or several neck tufts (in 103 formed into a Backward-hooked quill). In Fig. 98 the

horn is shaped into the cliché C-hooked quill. In Fig. 102, the neck, behind the horn, is prolonged into a second body, with tufts and tail forming a C-hooked quill. Thus one and the same horned head serves for two closely analogous dragons placed at right angles to each other.

Figs. 104—121.

Fig. 104 = Eumorfopoulos I: VII; Fig. 105 = Seikwa 45; Fig. 106 = BMFEA 20: 16; Fig. 107 = Tsun I: 39; Fig. 108 and Pl. 10 = Senoku 38; Fig. 109 = Wuying 51; Fig. 110 = Senoku 176; Fig. 111 and Pl. 10 = Seikwa 124; Fig. 112 = Seikwa 54; Fig. 113 and Pl. 10 = Yechung II, hia 3; Fig. 114 and Pl. 10 = Waterbury 14; Fig. 115 = Wuying 135; Fig. 116 and Pl. 10, a Hu, fotogr.; Fig. 117 = Seikwa 77; Fig. 118, a Ting, fotogr.; Fig. 119 and Pl. 10 = Seikwa 109; Fig. 120 and Pl. 11 = Senoku 39; Fig. 121 and Pl. 11 = Freer 19.

In Figs. 104—116 the body and tail form the cliché C-hooked quill (or curve). The turned-back head is more or less fancifully elaborated, mostly with a T-spiral ear (105—108, 110—115), and frequently with a C-hooked quill as crest on the head (104—108); in Fig. 109 the body is prolonged behind the head, forming a second C-hooked quill. The big S-shaped horn of Figs. 111, 112 has been exaggerated in Fig. 113 and extended downward so as to resemble a body; this has had the curious result that in Figs. 114—116 we find both a regular horn and this cross between a horn and a body, besides the regular C-hooked-quill body below the turned head. Cases such as these cannot really be fully understood and analysed without the preparatory stages of a stereotyping evolution being taken into consideration. — In Figs. 117—119 the dragons are cognate to the type Fig. 93 above with C-hooked body and an extra tuft on the nape of the neck, but instead of the curved-down tail there, our dragons here raise their tail upwards and their tail as well as the head-crest are embellished with various tufts. — Finally, Figs. 120, 121 are not head-turning dragons but form a curious category apart. They are legless, like all the preceding, and the under side of the body and the curved-up tail are bordered with C-hooked quills (the point of the bottom quill turned towards the dragon's head, in full contrast to what we found in the ordinary types, e. g. Fig. 48 above). Moreover this same cliché, the C-hooked quill, recurs on them as a crest behind the dragon's horn (120 has furthermore a Backward-hooked quill on the forehead).

From all these dragons without legs (Figs. 14—121) we now pass on to dragons with legs.

Figs. 122—150.

Fig. 122 = Yechung III, hia 7; Fig. 123 = Waterbury 53; Fig. 124 = Anyō 43; Fig. 125 = Palmgren 96; Fig. 126 and Pl. 11 = Waterbury 11; Fig. 127 and Pl. 11 = BMFEA 9: 27; Fig. 128 = Yechung I, shang 15; Fig. 129 = Palmgren 95; Fig. 130, a Kia in Somerville coll., fotogr.; Fig. 131 = Senoku 69; Fig. 132 = Kobijutsu 11; Fig. 133 and Pl. 11 = Ecke IX; Fig. 134 and Pl. 11, a P'ou, fotogr.; Fig. 135 = Senoku 73;

Fig. 136 and Pl. 11 = BMFEA 21: 7; Fig. 137 = BMFEA 20: 4; Fig. 138 and Pl. 11, a Ting, Pillsbury coll., fotogr.; Fig. 139 = Chicago 21; Fig. 140 and Pl. 11 = Seikwa 87; Fig. 141 = Wuying 63; Fig. 142 = Seikwa 146; Fig. 143 and Pl. 11 = Waterbury 37; Fig. 144 = Seikwa 147; Fig. 145 and Pl. 11 = Freer 9; Fig. 146 = Crown Prince p. 7; Fig. 147 = Paoyün 47; Fig. 148 = Sirén I: 45; Fig. 149 = Wuying 20; Fig. 150 = Wuying 50.

First we record some examples (Figs. 122—126) which show two legs: front leg and hind leg. It is obvious that this does not mean that the dragon was two-legged; it simply means that, the dragon being viewed in strict profile, we either see only the left legs, the right legs being hidden behind them, or *vice versa*. This trite remark gains its importance when, further below, we come across numerous categories of dragons with only one leg drawn (Figs. 139 and foll.). This does not mean that the dragon was one-legged but simply that we see either a left leg, concealing the corresponding right leg, or *vice versa*; in other words that the dragon is really two-legged. This is important, for it concerns a most comical scholastic speculation which has found its way even into the most recent and modern literature on bronzes (e. g. Jung Keng, Shang Chou yi k'i, Yetts: Cull etc.). Kuo yü: Lu yü tells about a nature demon, a goblin (»weird one of trees and stones«) called K'uei, and that this goblin was one-legged is stated earliest by Chuang-tsi: Ts'iu shuei (indirectly later on in Lü shī ch'un ts'iu: Ch'a chuan, where there is a discussion about whether Shun's music master K'uei [having the same name as that of the goblin] was one-legged or not). This has given the scholasts who wrote the Sung catalogue Po ku t'u lu the brilliant idea that since our dragon here undeniably shows only one leg it must be the K'uei! And so this variant of the dragon symbol on the bronzes constantly boasts of the fine name K'uei in our bronze catalogues. For the reasons just stated, our dragon is certainly not meant to be onelegged, and the name K'uei is a misnomer and should be eliminated from our terminology.

It should be added that a still more unreasonable praxis obtains in our bronze literature: the name K'uei has even been applied to the types of dragon studied above which have *no legs at all*. This is constantly so in Jung Keng's works, including his big compilation Shang Chou yi k'i, in Shang Ch'eng-tsu's Shī er kia ki kin t'u, in Yetts's catalogue of the Cull collection, in Waterbury's study of the bronze-décor animals etc. This is, in fact, quite amusing: first a dragon is called K'uei just because he has (apparently) one leg; and then a dragon which has no legs at all is made to participate in this honorific!

In all the Figs. 127—150 we have dragons of various kinds with nothing below but a single leg (except a tuft on the nape of the neck in 130). The straight-bodied type 127 has an adornment on the back which causes the hind part to form a Forward-hooked quill; Fig. 130 has instead a Backward-hooked quill, and Fig. 128 a C-hooked quill. The same quill recurs, without hook but symmetrically doubled into a pair, in Fig. 129 (this dragon has a hook on the forehead which together with the beak forms the cliché Forward-hooked curve). In Figs. 131—138 the body is not straight as in the preceding but has its tail curved upward.

Fig. 132 has a head adornment in the shape of a C-hooked quill. Fig. 133 has the same, and furthermore on the forehead an S-bottomed hooked quill, and on the foot a spur. Again, in Fig. 134 the head is adorned with tufts suggesting the cliché C-hooked quill. Fig. 136, on the contrary, has this cliché on the raised leg. Fig. 137 again has a tuft on the back which makes the hind part form a Forward-hooked curve. Finally, Fig. 138 has along the back of the raised tail a border in the shape of a C-hooked quill with the point downwards. These examples are instructive in that they show how the artist may easily fall into certain stereotyped formulas which he applies in various places. — Figs. 139—142 come close to the preceding, but the dragon has an arched back which together with the rolled-up tail results in an S-curve. In Fig. 139 the typical foot is visible with one claw raised and three claws descending (the outer two turned towards each other); in Fig. 140 the descending claws have coalesced into a round disc, a common phenomenon. Fig. 142 is a gaping dragon with two meeting teeth and various embellishments: on the foot (with only two descending claws) a spur, on the forehead a Forward-hooked curve and on the back a Forward-hooked quill. — Figs. 143—150 show dragons akin to the preceding but with the body bent more at right angles. On the back Fig. 144 has a single tuft (hook), but Figs. 145—148 have two tufts bent towards each other, just as in the cliché C-hooked quill; in Fig. 143 this ornament has been moved forward to the head, the place of the missing horn, and this dragon has an extra tuft on the front of the nose. Fig. 149 has, for a crest behind the Leaf horn, a big C-hooked quill.

Figs. 151—171.

Fig. 151 = Waterbury 7, our Pl. 1 c; Fig. 152 and Pl. 11 = Loo 1940, VIII; Fig. 153 and Pl. 11 = Yechung II, shang 19; Fig. 154 and Pl. 11 = Freer 18; Fig. 155 = Hakkaku 20; Fig. 156 = Yechung I, shang 21; Fig. 157 and Pl. 12 = Wuying 52; Fig. 158 = Seikwa 128; Fig. 159 = Seikwa 47; Fig. 160 and Pl. 12 = Seikwa 46; Fig. 161 = Yechung I, shang 21; Fig. 162 = Eumorf. I: XV; Fig. 163 = Seikwa 128; Fig. 164 = Freer 14; Fig. 165 and Pl. 12 = Antiques 45; Fig. 166 = Seikwa 44; Fig. 167 = Wuying 8; Fig. 168 and Pl. 12 = Waterbury 70; Fig. 169 and Pl. 12 = Seikwa 46; Fig. 170 = Seikwa 45; Fig. 171 and Pl. 12 = BMFEA 21: 14.

In Figs. 151—154 we have only one tuft under the body, which has a blade-like tail, and the result is the exceedingly common and important cliché Forward-hooked quill which we have come across earlier in other positions (e. g. Figs. 35, 43, 90, 91, 94); the winged dragon 154, moreover, has on its upper side a tuft similar to that below. Figs. 152 and 153 give the impression of being modifications of legless jawed dragons, the lower jaw having been turned into a leg and the upper jaw thus becoming a beak. Figs. 155—158 have for tail the Forward-hooked curve (cf. Figs. 42—44 above); in Fig. 157 the tuft (hook) is placed straight below the beginning of the curve, causing body, hook and curve together to form the well-known T cliché discussed above. Fig. 156 has as adornment on the curved tail a

down-hanging Forward-hooked quill. Fig. 155 has on top of the head a C-hook embellishment; on the back of Fig. 157 a backward-turning tuft combines with the curled tail to form the same C-hook figure. Fig. 158 has the tail raised in S shape and on the back a detached C-hooked quill. — Figs. 159, 160 have, behind the point of attachment of the leg, the Backward-hooked curve (cf. Fig. 38 above), and on top of the tail curve two tufts which, together with the tail, form the C-hooked curve. We have earlier (Fig. 133) met with a straight spur on the foot, and in Fig. 159 we have it again, though here adorned with a standing Forward-hooked quill. In Fig. 160 this has been further elaborated by a lower tuft which turns the straight spur into a Backward-hooked quill; thus, in Fig. 160, the stereotyped clichés are accumulated indeed. — In Figs. 161—171 we again find the C-hooked quill, the origin of which (confronting tufts below the body combined with a blade-like, pointed tail) we have studied above (Figs. 45 ff.). The front hook or tuft is sometimes attached to the back of the leg (as in Fig. 161), but mostly it is clearly independent of the leg, sometimes separated from it by a very definite space (Figs. 162, 163, 166 etc.). Embellishing hooks on the forehead often combine with the curve of the beak to make the cliché Forward-hooked curve (Figs. 163, 165, 166, 168) or C-hooked curve (Figs. 169, 171). Fig. 171 has a curved spur on the leg.

Figs. 172—195.

Fig. 172 = Seikwa 43; Fig. 173 and Pl. 12 = Seikwa 145; Fig. 174 = Eumorfopoulos 15; Fig. 175 = Senoku 72; Fig. 176 = Seikwa 90; Fig. 177 = Seikwa 72; Fig. 178 = BMFEA 21: 2; Fig. 179 = Freer 16; Fig. 180 = Freer 17; Fig. 181 and Pl. 12 = Freer 16; Fig. 182 and Pl. 12 = Freer 18; Fig. 183 = Senoku 70; Fig. 184 = Wuying 143; Fig. 185, a Hu (Freer Gallery, fotogr.); Fig. 186 and Pl. 12 = Waterbury 48; Fig. 188, a Hu (Freer Gallery, fotogr.); Fig. 189 = Waterbury 68; Fig. 190 and Pl. 12 = Seikwa 43; Fig. 191 = Waterbury 5; Fig. 192 = Seikwa 13; Fig. 193 and Pl. 12 = Seikwa 14; Fig. 194 and Pl. 12, a Kuei, fotogr.; Fig. 195, a Tsüe, fotogr.

In Figs. 172—186 the tail is curled up, with the tufts describing the cliché C-hooked curve. In Figs. 188—192 it is turned down, in 189—192 after first having ascended at a bold right angle. As in the preceding group, the front tuft is sometimes independent of, sometimes attached to the leg. In Figs. 186 the leg has a hooked spur. The hooks on the head (one or two), as in the preceding category, often combine with the nose or the beak to form a Forward-hooked curve or a C-hooked curve, or sometimes a Forward-hooked quill (Fig. 185) or even a C-hooked quill (Fig. 184). In a few instances (182, 190, 192) there is also a tuft on the raised tail. — Figs. 193—195 are closely cognate to Figs. 120, 121 above; instead of the ordinary C-hooks under the body, their body and curled-up tail are bordered with detached embellishments: in Fig. 193 two Backward-hooked quills, in Fig. 194 one Backward-hooked and one C-hooked quill, in 195 two C-hooked quills. Moreover they have, behind the horns, crests in the shape of a C-hooked quill and Fig. 195 has on the forehead an S-bottomed hooked quill. Figs. 196—209.

Figs. 196—209.

Fig. 196 and Pl. 12 = Ecke 8; Fig. 197 = BMFEA 21: 5 (supporting animal); Fig. 198 = Kwankarō, shang 4; Fig. 199 = BMFEA 6: XVI; Fig. 200 and Pl. 13 = Kwankarō, shang 18; Fig. 201 = Waterbury 65; Fig. 202 = White XXII; Fig. 203 = Palmgren 96; Fig. 204 = Seikwa 146; Fig. 205 = Antiques 21; Fig. 206 = Senoku 176; Fig. 207 = Seikwa 19; Fig. 208 = White XXIV; Fig. 209 and Pl. 13 = Waterbury 44.

These examples all illustrate the clichés which I have called »double-hooked»: the tufts are in pairs, close together and mostly turned in opposite directions. Figs. 196—201 are dragons without legs, 202—209 dragons with legs. We find the cliché Double-hooked quill in Fig. 204; Double-hooked curve in Figs. 196—198, 202, 203; C-and-double-hooked quill in Figs. 206, 207; C-and-double-hooked curve in Fig. 205 (Figs. 199, 202, 208, 209 likewise have this feature, though the »C» nature of their confronting tufts is obscured by the elongation of the bodies). We find additional »double-hooks» on the head of Figs. 197 and 202. Other extra adornments are the Forward-hooked quills on Fig. 198, »C-hooks» on the heads of Figs. 198, 200, 205, and single hooks on the heads of Figs. 201, 204, 207 and the wing of 204. Observe the very significant fact that the Bottle horn of Fig. 209 has a Leaf horn engraved on its base; the leaf figure in this position is evidently not meant to be an ear. This dragon 209 possesses one very curious feature: its foot has been elaborated into a secondary small dragon.

So far we have studied a long series of dragons which represent frequently occurring, »regular» types. Some other types of »regular» dragons will be studied under nos 430 and following below. But besides those regular types there are a large number of more or less »irregular» dragons, which cannot be fitted into any of those normal categories: they often have features in common with the regular ones, but in different constellations, and moreover they frequently possess some highly eccentric details. It is not possible to record all these aberrant dragons here, since the variations are indeed unlimited and since, moreover, many published photographs of bronzes do not show the décor in full (one side only being depicted and half a dragon being visible). Nevertheless it is worth while to give some fifty examples of fanciful dragon variations:

Figs. 210—229.

Fig. 210, a P'ou (photogr.); Fig. 211, a P'ou (photogr.); Fig. 212 = Ku kung 22; Fig. 213, a Hu (photogr., Freer Gallery); Fig. 214 = Sung, Sü 61; Fig. 215 = Kobijutsu 19; Fig. 216 = Freer 5; Fig. 217 = BMFEA 8: 12; Fig. 218 = Waterbury 35, our Pl. 7 b; Fig. 219, a Tsun (photogr., Cleveland Mus.); Fig. 220, a Kuang (photogr.); Fig. 221 = Yechung II, hia 4; Fig. 222, a Kia (photogr.); Fig. 223 = Senoku 99; Fig. 224 = Senoku 11; Fig. 225 = Yechung III, hia 24; Fig. 226 = Anyō 38; Fig. 227 = Waterbury 23; Fig. 228 = Anyō 86; Fig. 229 = Anyō 86.

In Figs. 210—214 there are two bodies, one in a rising curve and one straight,

plain (210) or in the shape of a Forward-hooked quill (211—213), or else curved downward (214). Fig. 215 has double tufts below, and as crest on the head the C-and-double-hooked quill. Figs. 216—220 have C-hooks, C-hooked quills, or C-hooked curves and Forward-hooked quills in various combinations, while 218—20 have long bodies curved over the heads. In Fig. 221 both tufts are turned backwards instead of meeting, in the ordinary way. Fig. 222 has a tuft in front of the leg, and Fig. 223 has tufts behind both legs, and a curiously adorned head: the nose takes the form of the cliché C-hooked quill, the Bottle-horn continued into Forward-hooked quills. Fig. 224 is somewhat akin to type 160 above, but the spur on the foot has been further elaborated with various hooks and ends in a large C-hooked quill; this latter and the Forward-hooked quill adorn the body and the horn. In Fig. 225 the ordinary C-hooked quill for the body has been deformed by the front hook being turned into a Forward-hooked quill and the hind hook being doubled. Fig. 226 has two bodies with Forward-hooked curves. Fig. 227 is an extremely reduced type 48. Figs. 228, 229 are bone carvings and are only adduced for comparison (Anyō and White have several even more complicated types); the hook adornments are the same as on bronzes.

The head-turning dragons are particularly rich in »irregular» variations:

Figs. 230—257.

Fig. 230 = Cull IV; Fig. 231 = Senoku 33; Fig. 232 and Pl. 13 = Waterbury 67; Fig. 233 = Yechung I, shang 10; Fig. 234 = Yechung II, shang 6; Fig. 235 = Hakkaku 8; Fig. 236 and Pl. 13 = Hakkaku 14; Fig. 237 = Shant'u 144; Fig. 238 = Chengts'iu 50; Fig. 239, a Yu (photogr.); Fig. 240 = BMFEA 8: 25; Fig. 241 = Shuangkien, shang 14; Fig. 242 = Senoku 65; Fig. 243 and Pl. 13 = Eumorf. I: XIII; Fig. 244 = Exhibition Pl. 14; Fig. 245 = Chicago XVI; Fig. 246 = BMFEA 20: 1; Fig. 247 = Chicago XXIV; Fig. 248 = Seikwa 112; Fig. 249 and Pl. 13 = Eumorf. I: XVIII; Fig. 250 = Hakkaku 5; Fig. 251 = Chengts'iu 26; Fig. 252, a Tsun (photogr.); Fig. 253 = Hakkaku 12; Fig. 254 = Seikwa 16; Fig. 255 = Eumorf. I: VII; Fig. 256 = Seikwa 121; Fig. 257 = Hentze LXIV.

Fig. 230 is a perfectly normal dragon, with C-hooked quill, but for the curious little leg and foot raised upwards. There is a similar leg in Fig. 231, which has also an unusual C-shaped tuft on the nape of the neck; the same is true of Fig. 232 which otherwise has a normal Forward-hooked quill. Figs. 233 and the following figures are closely cognate to some of the normal types (Figs. 92 et seq.), but their bottom tufts do not follow the regular patterns: sometimes instead of leaning towards each other (C-hook type) they are »parallel» and point in the same direction (Figs. 235, 237—240, 244, 246, 249) or there are supernumerary tufts (Figs. 247, 248, 250—253). There are curiously placed legs with clawed feet (Figs. 241—246). We find *passim* and in various positions the embellishing attributes, the origin of which we have already studied: The Forward-hooked quill (Figs. 233, 234, 237, 243 [doubled at the tail, cf. 252], 246, 247, 248, 251, 252, 257) the C-hooked quill

(Figs. 236, 241, 242, 246, 247, 250) etc. Observe the detached head-crest of Fig. 254, in the shape of the cliché S-bottomed hooked quill, the origin of which will be discussed further below.

We now pass on to the T'aot'ie which is cognate to the dragon in that it has a dragon's body; we thus exclude from our discussion here the exceedingly common décor theme »Mask T'aot'ie« and limit our investigation to the equally common »bodied T'aot'ie«.

The close connection between T'aot'ie and dragon is emphasized by the fact that here too we find the principal types of horns: Bottle horn (Fig. 286), C horn (Fig. 277), Comma horn (Fig. 284), S horn (Fig. 275), T horn (Fig. 259), Leaf horn (Fig. 343).

Again we have the same contrast between Jawed T'aot'ie (Fig. 259) and Gaping T'aot'ie (Fig. 258) as between Jawed and Gaping dragons.

All these distinctions — in themselves fundamentally important in the grammar of the bronze décor — having been pointed out here, we shall not repeat them in the following discussion. We shall follow up the same line as before and direct our attention to the under side of the T'aot'ie-dragon.

Figs. 258—273.

Fig. 258 = Crown Prince p. 5; Fig. 259 and Pl. 13 = Yechung III, shang 10; Fig. 260 = Exhibition 5; Fig. 261 = BMFEA 6: 12; Fig. 262, a Chī (Kahn coll., our Pl. 1 a); Fig. 263 = Ku kung 24; Fig. 264 and Pl. 13 = Ku kung 27; Fig. 265 = Tsun 1: 23; Fig. 266 = Hentze p. 59; Fig. 267 = Sung, Sü 61; Fig. 268 = Sung, Sü 64; Fig. 269 = Anyō 34; Fig. 270 = Crown Prince p. 7; Fig. 271 and Pl. 13 = Waterbury 39; Fig. 272 = BMFEA 20: 7; Fig. 273 = Ku kung 28.

Figs. 258—261 show dragons with a body that is bare (without leg or tuft) on the under side (on the upper there are sometimes adorning tufts resulting in C-hooked curve [260], C-and-double-hooked curve [261]). In all of the following there are tufts on the under side of the body, forming one or other of the clichés with which we are already familiar: Forward-hooked quill in Fig. 262, Forward-hooked curve in Figs. 263—265; Backward-hooked curve in Figs. 266, 267; C-hooked quill in Figs. 268—272; and Double-hooked curve in Fig. 273. Again, there are embellishments on top in the shape of a Forward-hooked quill in Fig. 266 (on the back), C-hooked quills (inserted between the front tuft and the tail curve as well as on top of the tail curve and the horn) in Fig. 267, Double-hooked quill and several tufts in Fig. 273.

T'aot'ie-dragons with legs are much more common:

Figs. 274—299.

Fig. 274 and Pl. 13 = Shierkia, Tsun 4; Fig. 275 and Pl. 14 = Yechung II, shang 38; Fig. 276 = Wuying 51; Fig. 277 and Pl. 14, a Ting (Kahn coll., fotogr.); Fig. 277a = Wuying 141; Fig. 278, a Ting (Malmö Museum, fotogr.); Fig. 279 = Senoku 192; Fig.

280 = Freer 17; Fig. 281 and Pl. 14 = Waterbury 1; Fig. 282 and Pl. 14 = Waterbury 2; Fig. 283 = Senoku 172; Fig. 284 = Waterbury 6; Fig. 285 and Pl. 14 = Waterbury 5; Fig. 286 = Ill. Cat. 62; Fig. 287 = Senoku 176; Fig. 288 and Pl. 14 = Yechung III, shang 13; Fig. 289 = Henkin 18; Fig. 290 = Hentze p. 49; Fig. 291 and Pl. 14, Appliqué in MFEA; Fig. 292 an Yi (photogr.); Fig. 293 = Hentze p. 62; Fig. 294 and Pl. 14 = Senoku 26; Fig. 295, a Li-ting (C. T. Loo coll., photogr.); Fig. 296, a Hu (Freer, photogr.); Fig. 297 = Sirén I, 33; Fig. 298 and Pl. 15 = Seikwa 102; Fig. 299 = BMFEA 21: 9.

In Figs. 274—278 the under side of the body has nothing but the leg, the tail being curled down in Figs 274—276 (with adornments on the upper side in 275, 276, forming a C-hooked curve), and curled up in 277, 277a, 278. In Fig. 279 only the shoulder of the leg is visible, the rest of the body being hidden. In all of the following there are tufts on the under side, of various types and forming one or other of our common clichés. Fig. 280 has the Forward-hooked curve, Fig. 281 the Backward-hooked quill, Figs. 282—288 the Backward-hooked curve, Figs. 289—293 the C-hooked quill, Figs. 294, 295 the C-hooked curve, and Figs. 296—299 a Forward-hooked quill hanging down perpendicularly just behind the leg. As usual, there are embellishing tufts on the upper side of the body, forming a Forward-hooked curve in Figs. 280, 284, 285, Backward-hooked curve in Fig. 296, C-hooked curve in Figs. 282, 286—288, 294, 295, a Forward-hooked quill in Figs. 293, 297—299 (and a C-hooked quill on the horn in Fig. 295).

In all the cases 274—298 the leg has nothing but the ordinary claws, one turned upward, the others downward, in the regular fashion. Only the last example, Fig. 299, has a spur on the foot, and this brings us to the next group which is closely cognate to the preceding but has the foot spurred, plainly or elaborately.

Figs. 300—317.

Fig. 300 and Pl. 14 = Tsun 1: 14; Fig. 301 = Cull 14; Fig. 302 = Cull 1; Fig. 303 = Ecke XIV; Fig. 304 and Pl. 15 = BMFEA 6: 8; Fig. 305 and Pl. 15 = Senoku 28; Fig. 306 = Paoyün 21; Fig. 307 = Shierkia, King 6; Fig. 308 and Pl. 15 = Freer 25; Fig. 309 = Waterbury 23; Fig. 310, a Tsüe (C. T. Loo coll., photogr.); Fig. 311 and Pl. 15 = Waterbury 4; Fig. 312 and Pl. 15 = Shierkia, King 6; Fig. 313 = Senoku 26; Fig. 314 and Pl. 15 = Wuying 8; Fig. 315 and Pl. 15 = Senoku 27; Fig. 316 = Shant'u 132; Fig. 317 and Pl. 15, a Kuang (Freer, photogr.).

In Figs. 300—304 we have the under side of the body (which has the tail curled up in Figs. 300, 301, curled down in 302—304) quite bare but for the spurred leg. In all of the following there are tufts under the body forming the familiar clichés: Forward-hooked quill in Fig. 305, Backward-hooked curve in Fig. 306—309, C-hooked quill in Figs. 310—313, C-hooked curve in Figs. 314, 315, and C-and-double-hooked quill in Figs. 316, 317. On the upper side there are, as usual, tufts which give rise to the clichés C-hooked curve (Figs. 302, 304, 306, 307, 309). Forward-hooked quill (Figs. 303, 304, 309), C-hooked quill (Figs. 303, 308, 314—317), C-and-double-hooked quill (Figs. 314, 315).

Figs. 318—327.

Fig. 318 = Shierkia, Chu 25; Fig. 319 = Hakkaku 18; Fig. 320 = Yechung III, shang 9; Fig. 321 = Waterbury 37; Fig. 321a = BMFEA 21: 9; Fig. 322 = Yechung III, shang 45; Fig. 323 and Pl. 15 = Shierkia, Chu 24; Fig. 324 = Shierkia, Shī 14; Fig. 325, a Hu (Freer, fotogr.); Fig. 326 = Wuying 50; Fig. 327 = Ecke XVI.

This group has the leg turned outwards, and the spur, plain in Figs. 324 and 327, is elaborated into a C-hooked quill in all the rest (Figs. 310—323, 325, 326). The body, of which the tail first rises and then curls down in Figs. 318—325, is bare on the under side (but for the leg) in Figs. 318—324; but it has tufts forming C-hooked curve in Fig. 325, C-hooked quill in Fig. 326 and Forward-hooked quill in Fig. 327. On the upper side, adorning tufts give rise to the clichés C-hooked curve in Figs. 319, 320, 322—325, Forward-hooked quill in Figs. 321, 325, 326, 327, and C-hooked quill in Figs. 321, 326. In Figs. 322—324 the raised body and curled-down tail have been elaborated, through the addition of an eye, into a bird-like figure, which is emphasized, in Fig. 322, by a T-horn. In Fig. 325 the mouth-line of the T'aot'ie is drawn according to the cliché C-hooked quill.

Figs. 328—345.

Fig. 328 = BMFEA 21: 15 (upper); Fig. 329 = Hakkaku 2; Fig. 330 = Kukung 24; Fig. 331 and Pl. 16, a Kuei (C. T. Loo coll., fotogr.); Fig. 332 = Shierkia, Chu 6; Fig. 333 = Teh'ou III; Fig. 334 and Pl. 16 = Tsun 1: 13; Fig. 335, a Ting (C. T. Loo coll., fotogr.); Fig. 336 = Seikwa 89; Fig. 337 = Senoku 26; Fig. 338 and Pl. 16 = Wuying 6; Fig. 339 = Shierkia, Shuang 2; Fig. 340 = Tsun 1: 12; Fig. 341 = Yen'ku 4; Fig. 342 and Pl. 16 = Ecke 7; Fig. 343, a Ting (MFEA); Fig. 344 and Pl. 16, a Square Ting (Martin Månsson coll.); Fig. 345 and Pl. 16 = BMFEA 21: 1; Fig. 345a and Pl. 16, a Li-ting (Freer, fotogr.).

In this group the spur on the foot is further elaborated. In Figs. 328—331 there is a rising tuft, producing the cliché Forward-hooked quill. In Fig. 331, at the upward bend of the body, there is a long, bent tuft in the shape of a Forward-hooked quill, and in Figs. 332, 33 this figure has been moved down and forms the spur on the foot. In Figs. 334—340 the horizontal spur is adorned with a vertical Forward-hooked quill, of quite the same kind as we had in the dragon type Fig. 159 above, and sometimes when the angle between spur and quill is rounded off, the result is practically the cliché C-hooked quill, as in Figs. 336, 338. In Fig. 340 the foot is reduced to a simple volute. In Fig. 341, instead of a standing quill on the spur we have a Forward-hooked curve. In Figs 342—345 there is a descending tuft on the spur, in Figs 343—345 combined with the same standing excrescences as before (Fig. 343 = Fig. 328, Fig. 344 = Fig. 334, Fig. 345 = Fig. 336). In the same position as that in which Fig. 331 has its bent Forward-hooked quill, Fig. 330 has the cliché S-bottomed hooked quill, an element to be discussed further below. — The body and tail of all these T'aot'ie-dragons have tufts on the under side, which produce our familiar clichés: C-hooked quill in Fig. 328, Backward-hooked curve in Figs. 329, 333, 334—341, 343, 344, Forward-hooked curve in

Figs. 331, 332, C-hooked curve in Figs. 342, 345. As usual, there are frequently tufts on the upper side of the body and tail, producing the clichés Forward-hooked curve (Figs. 329, 334, 335), C-hooked curve (Figs. 331, 333, 336—341, 343—345), Forward-hooked quill (Figs. 333, 343), C-hooked quill (Fig. 342, here also on the horn). Fig. 345a has the same treatment of the foot and spur as several preceding ones, but the body is curled up.

We now come to several groups in which the body (with tail) and the leg (with foot) are detached from one another:

Figs. 346—355.

Fig. 346 and Pl. 16 = Freer 1; Fig. 347 = Seikwa 128; Fig. 348 = Senoku 30; Fig. 349 = Freer 15; Fig. 350 = Chengsung, chung 19; Fig. 351 and Pl. 16 = Yen'k'u, shang 27; Fig. 352 and Pl. 16 = Seikwa 31; Fig. 353 and Pl. 17 = Kwankarō I: 3; Fig. 354 and Pl. 17 = Seikwa 129; Fig. 255, a Yu, C. T. Loo coll., fotogr.

In all these the leg is a simple C curve, ending in the ordinary foot, except Fig. 354 which has a very elaborate leg with various tufts. The characteristic feature in this group is that the body forms a more or less S-like bend, at the bottom often swelling into a lump. The under side of the body has either no tuft at all, as in most of the cases (Figs. 346, 347, 349—354), or sometimes a single tuft (producing a Forward-hooked curve), as in Fig. 348; quite exceptionally a row of Forward-hooked quills, as in Fig. 355. On the upper side of body and tail there are frequently hooks producing C-hooked curve (Figs. 346, 347, 349—351) and extra tufts lower down (Figs. 346, 347). Eccentric additions of detached C-hooked quills occur in Figs. 352, 354.

Figs. 356—377.

Fig. 356, a Kuei (Oeder coll., fotogr.); Fig. 357 = Chicago 16; Fig. 358 and Pl. 17, a Li-ting (Oeder coll., fotogr.); Fig. 359 = Gedächtnis 7; Fig. 360, a Kuei (Mus. Fine Arts, Boston, fotogr.); Fig. 361 and Pl. 17 = Freer 9; Fig. 362 = Shang Chou 45; Fig. 363 = Seikwa 20; Fig. 364 = Wuying 42; Fig. 365 = Wuying 43; Fig. 366 and Pl. 17 = Hakkaku 3; Fig. 367 = Paoyün 12; Fig. 368 = Hakkaku 6; Fig. 369 = Yen'k'u, shang 35; Fig. 370 and Pl. 17 = Kukung 32; Fig. 371 = Hentze, Pl. LI; Fig. 372 = Chengts'iu 40; Fig. 373 and Pl. 17 = Senoku 60; Fig. 374 and Pl. 17 = Yen'k'u, shang 37; Fig. 375 = Wuying 15; Fig. 376 = Shierkia, King 2; Fig. 377 and Pl. 18 = Tsun 1: 20.

Here, as in the preceding group, the body and the leg are detached from one another. The characteristic feature in the present group is that the body has a fat comma-shaped bottom stroke, the fatter end inwards (nearest the head) and tapering so as to end in a sharp point directed outwards. — In Figs. 356—374 the legs and feet are drawn with a highly varying degree of completeness. A fairly long leg, with the shoulder indicated by a volute, occurs in cases like Figs. 357, 359, 360, 363, 364, 366, 371; but frequently it is so shortened as to be little more than a lump of the same height as the raised claw, e. g. in Figs. 365, 367. The leg

is bare in some instances, e. g. Figs. 359, 361, sometimes reduced to a mere hook, as in Fig. 372; but mostly it has a spur, simple as in Figs. 356, 358, 362 etc., or elaborated into a Forward-hooked quill, Fig. 357, or a C-hooked quill, Fig. 360, or a Backward-hooked quill, Fig. 363. — The body with tail, on top of the comma-shaped bottom stroke, at first rises and then curves down in Figs. 356—361, ascending in the form of a quill in 374. It is mostly embellished with a variety of tufts, reproducing all the well-known clichés. On the under (outer) side we find a Forward-hooked curve in Figs. 357, 358, 359, Forward-hooked quill in Figs. 362—372 (together with the bottom comma sometimes giving the impression of a C-hooked quill); on the upper (inner) side is a C-hooked curve in Figs. 356, 357, 360, 361, Forward-hooked curve in Figs. 358, 359 (and an extra tuft lower down in most of these cases). — At the end we have placed Figs. 375—377. In these the treatment of the body is such as we have already studied (375 = 359, 376 = 362, 377 = 363), though the leg and the foot are fashioned in a most eccentric way, and below the body there is a row of C-hooked quills.

Figs. 378—384.

Fig. 378 and Pl. 18 = Senoku 28; Fig. 379 = Tch'ou XIV; Fig. 380 = Seikwa 56; Fig. 381 and Pl. 18 = Yechung II, shang 27; Fig. 382 = Freer 2; Fig. 383 = Ecke 12; Fig. 384 = Seikwa 34.

This group is closely akin to the preceding, the leg and body being detached from one another, and the foot with or without a spur. But the body has a bottom stroke which instead of being comma-shaped is a slanting figure with a slight S-bend: what we have called the cliché »S-bottomed hooked quill«, e. g. Fig. 378. In Fig. 379, however, this is already strongly reduced, and in the following the drawing of the body has lapsed into the cliché C-hooked quill (Figs 380—383; 384 is curiously deformed).

Figs. 385—408.

Fig. 385 = Yechung I, shang 21; Fig. 386 = Seikwa 44; Fig. 387 = Kukung 29; Fig. 388 and Pl. 18 = Ackerman 37; Fig. 389 and Pl. 18 = Wuying 133; Fig. 390 and Pl. 18 = Shierkia, Chu 28; Fig. 391 = Kukung 31; 392, a Yi (Freer, fotogr.); Fig. 393 = Yenku', shang 28; Fig. 394 and Pl. 18, a Tsüe (photogr.); Fig. 395 = Shierkia, Kiu 5; Fig. 396 and Pl. 18 = Waterbury 36; Fig. 397 and Pl. 18 = Antiques 9; Fig. 398 = Sung, Sü 62; Fig. 399 and Pl. 18 = Seikwa 17; Fig. 400 and Pl. 19 = Senoku 28; Fig. 401 = Shierkia, Kü 30; Fig. 402 = Wuying 40; Fig. 403 = Waterbury 10.; Fig. 404 = Kukung 27; Fig. 405 = Tsun 1: 23; Fig. 406 = Seikwa 34; Fig. 407 = Wuying 134; Fig. 408 and Pl. 19 = Seikwa 121.

In Fig. 385 leg and body (the latter a hooked quill) have coalesced into one figure, and the idea seems to have been the same in Fig. 386, though the result is highly eccentric: two C-hooked quills in opposed positions. In the following Figs. 387—399 there is no leg, only the body with tail in one or other of the stylized clichés with which we are now already familiar: Comma-bottomed hooked quill in

Figs. 387—390 (in Fig. 390 the bottom comma further embellished), S-bottomed hooked quill in Figs. 391—396 (in Fig. 396 curiously doubled), a plain S figure in Fig. 397, C-hooked quill in 398, and another, deformed as in Fig. 384, in Fig. 399. In Figs. 398, 399 the body has been crowded out so as to occupy only a modest space in the upper corner. In Figs. 400—408 there is no body, only a leg with foot in the shapes already studied above: with or without a spur. In the last in stances (Figs. 406—408) the drawing is strongly reduced, Fig. 408 showing only a small, C-shaped rudiment. — Observe how the common clichés reappear again in various positions. The Double-hooked curve, for instance, serves as the forehead and nose line in Figs. 386 and 399 and performing the same function we have a similar curve having Forward-hooked quills at both ends in Fig. 390.

As in the case of the dragons studied earlier, we have here first recorded the principal types of normal and regular T'aot'ie-dragons (»bodied T'aot'ie»), and have then to add some specimens of a more irregular and fanciful character. There is, in fact, no limit to the eccentricities which the ancient artists allowed themselves in varying the T'aot'ie theme. The »aberrant» types can thus in no way be completely recorded, we have to be satisfied with some examples.

Figs. 409—429.

Fig. 409 = Shang Chou 138; Fig. 410 = Kukung 3; Fig. 411 and Pl. 19 = Seikwa 93; Fig. 412 = Tsun 1: 30; Fig. 413 = Cull XIV; Fig. 414, an axe (photogr.); Fig. 415 = Waterbury 22; Fig. 416 = Loo 1939: XI; Fig. 417 = Seikwa 46; Fig. 418 = Yechung III, hia 25; Fig. 419 = Shuangkien, shang 24; Fig. 420, a square Ting (photogr.); Fig. 421 = Seikwa 67; Fig. 422 and Pl. 19 = Freer 7; Fig. 423, and Pl. 19 a Kuei (Oeder coll., photogr.); Fig. 424 = Wuying 135; Fig. 425 = Seikwa 66; Fig. 426 = *ibid.*; Fig. 427 = Yechung III, hia 17; Fig. 428 = Kukung 32; Fig. 429 = Hentze, Pl. 63.

Figs. 409—411 have the body forming a big loop starting from the top of the head, in the first two adorned with borders showing the usual C-hooks or Double-hooks with quills or curves; in Fig. 409, moreover, the ear has the shape of a C-hooked curve, and in Fig. 410 the jaw line is bordered by a C-hooked quill. Fig. 412 shows a body starting just above the eye, and bordered with similar Double-hooked curves. In Fig. 413 the Double-hook is curiously placed just above the jaw. Fig. 414 has body and tail fashioned like an ordinary C-hooked quill, but for the rest the T'aot'ie is badly deformed; in Fig. 415 the S-shaped body is bordered on the under (outer) side by a broad Forward-hooked quill, and the lower part of the T'aot'ie is misshapen. In Fig. 416 the body and tail assume the form of a C-and-double-hooked curve starting just below the eye, and the same cliché recurs both in the eyebrow and in the nose ridge. Fig. 417 has on the shoulder of the body a C-and-double-hooked quill, and the descending and rolled-out body is adorned with tufts producing Double-hooked curves, both on the outside and on the inside; the horn is bordered by a C-hooked quill. Fig. 418 has two lengthy

bodies, one emanating from the top of the head, the other from the region above the ear, both richly adorned with single or double hooks. Fig. 419 is very curious in that the body is the Comma-bottomed hooked curve but placed upside down. Fig. 420 is a quite ordinary T'aot'ie-dragon as far as to the big volute of the tail; but then this is prolonged by the addition of a C-hooked quill. Fig. 421 differs from the regular type Fig. 298 in that the descending Forward-hooked quill is placed in front of the leg instead of behind. Fig. 422 has two tails to one body, one of them embellished with hooks. Fig. 423 has the spurred leg on a level with the ear, and above it a rolled-up body with a C-hooked quill border; a similar border on the back of the jaw. Fig. 424 is fundamentally a head-turning dragon of the type 114, its proper body being below its eye and nose; but then it has been provided with a large additional body (cf. Fig. 116), here rising as a C-hooked quill, and below this secondary body there are a leg and an outward-turned foot with C-hooked quill spur (as in Fig. 318 and foll.). Fig. 425 recalls Fig. 325, but it has two big Forward-hooked quills horizontally protruding from the bend of the body. Fig. 426 (on the same vessel) is simpler (the tail having a simple C-hooked curve), but it has the same curious mouth-line drawn as a (doubled) C-hooked quill. Fig. 427 has a body agreeing in principle with that of Fig. 390, and Fig. 428 shows the same hooked S-figure as Fig. 375 above. Fig. 428 has a large number of details consisting of tufts or hooks, and falling into one or other of the conventional clichés (an inverted S-bottomed hooked quill furthest down, and beside it a C-hooked quill continuing in a Forward-hooked quill, etc.). In Fig. 429 the leg has been reduced to an outward-turned volute. As already stated, the T'aot'ie-dragons can be fancifully varied almost indefinitely.

There remains, however, a large group of bodied T'aot'ie which I have found it convenient to discuss by itself. In Figs. 120, 121 and 193, 194 we had dragons with curled-up tail and a drawn-out crest behind the horn, in the shape of a C-hooked quill, and under the body the ordinary tufts in the shape of a C-hooked-quill but turned the wrong way. In our present group we find the same dragon with quite different under-side elements; and in connection with this dragon we shall deal with various derivatives and (sometimes extreme) simplifications and corruptions. The T'aot'ie dragon in this group is for the most part dependent, i. e. its head forms one half of a connected T'aot'ie head; but sometimes it is independent, forming a complete dragon in itself, and it is only the antithetical placing of two such dragons closely together that gives the impression of a T'aot'ie.

Figs. 430—451.

Fig. 430, and Pl. 19, a Square Yi, fotogr.; Fig. 431 = Wuying 51; Fig. 432 = Kukung 27; Fig. 433 = Wuying 22; Fig. 434 = Crown Prince, p. 137; Fig. 435 and Pl. 19 = Hakkaku 18; Fig. 436 = Seikwa 129; Fig. 437 = Chicago 5; Fig. 438, a Kuei, fotogr.;

Fig. 439 = Sün hien 11; Fig. 440, a Ting, fotogr.; Fig. 441 and Pl. 19, a Square Ting, fotogr.; Fig. 442 and Pl. 19, a P'an, fotogr., Royal Ontario Mus.; Fig. 443 and Pl. 10 = Wuying 18; Fig. 444 = Freer 25; Fig. 445 and Pl. 20 = Waterbury 9; Fig. 446 = Sung, Sü 58; Fig. 447 = Shierkia, Chu 12; Fig. 448 = Chengts'iu 11; Fig. 449 and Pl. 20 = Waterbury 30; Fig. 450 = Tsun 2: 18; Fig. 451 and Pl. 20 = BMFEA 21: 4.

In Figs. 430—437 the dragons have no legs. There is only one tuft, directed backwards, on the under side in Figs. 430 (just behind the jaw) and 431 (in the middle of the body); and two tufts in Figs. 432—435. With the curled-up tail, there results the familiar cliché Backward-hooked curve. In Fig. 436 we have the C-hooked curve, the hind tuft so placed as to continue the curve of the tail directly and to form a T figure (we met with this phenomenon earlier, in Fig. 157); moreover, this figure has detached C-hooked quills as a filling for empty spaces. Fig. 437 has the C-and-double-hooked curve. In all these cases the upper side of the body has a single tuft. In Fig. 435 the crest is somewhat disfigured, the front tuft turned forwards instead of backwards as in the other, normal types. — In Figs. 438—451 we have dragons with a leg. In Figs. 438, 439, the leg is alone on the underside, in Fig. 440 there are, behind the leg, two tufts forming, with the tail, the C-hooked curve. The same is true of Figs. 441, 442, but here, as in Fig. 436 above, the hind tuft is so placed as to continue the line of the tail, forming a T figure; this same arrangement obtains in all the Figs. 443—447, but in the latter there is an additional backward-directed tuft in front of the leg. Fig. 447 has all the empty spaces filled in with the cliché Comma-bottomed hooked quill. Figs. 448—451 have »Double hooks» behind the leg (in 451 two doublehooks); moreover Figs. 449—451 have the same T-producing tuft under the tail as Figs. 441—447. On the upper side of the body there are mostly single tufts, in some cases (Figs. 442, 446, 449, 450) double or even triple (451). Fig. 438 has a backward-hooked quill as crest instead of a C-hooked quill (very unusual).

Figs. 452—469.

Fig. 452 and Pl. 20 = Freer 4; Fig. 453 and Pl. 20 = Shierkia, Hia 2; Fig. 454 and Pl. 20 = Freer 4; Fig. 455 = Yechung III, shang 27; Fig. 456 and Pl. 20 = Kwankarō 1: 3; Fig. 457 = Senoku 24; Fig. 458 and Pl. 20 = BMFEA 9: 32; Fig. 459 and Pl. 20 = Bone carving from An-yang, fotogr.; Fig. 460 = Senoku 52; Fig. 461, a Kuang, fotogr. (Sedgwick coll.); Fig. 462 and Pl. 20 = Kwankarō I: 10; Fig. 463 = Cull, p. 28; Fig. 464 and Pl. 20 = Eumorf. I: 18; Fig. 465 = Sün hien 15; Fig. 466 = BMFEA 20: 1; Fig. 467 and Pl. 20 = Hakkaku 14; Fig. 468 = Kobijutsu 15; Fig. 469 = Seikwa 134.

From the well-defined dragons of the preceding groups we proceed to a series of curious deformations. First, the head of the dragon is stylized so as to be hardly recognizable, only the typical eye remaining (Figs. 452—454). In Fig. 453 we meet, for the first time, this curious formation of a square, encasing, so to speak, the round eye, and with hooks (tufts) in the four corners. In the following types, 455—465, the dragon is doubled in a peculiar way; the eye, common to both halves, is in the centre, and on each side there is a dragon of the same type which we have

studied in Figs. 430 and following; but either the dragon to the left of the eye (as in Fig. 455) is inverted, i. e. is to be seen from above, or the one to the right is inverted (as in Fig. 456). The bodies show the same tufts (hooks) and quills or curves with which we are now familiar, creating the common clichés C-hooked quill and Forward-hooked curve (Fig. 455), etc. The number and placing of single or double hooks (tufts) vary, from a total absence (Fig. 460) to an exuberant richness (Figs. 464, 465); in some cases (Figs. 462—465) the hind tuft is placed straight below the tail, creating a T figure, just as in type 441 above. Particularly interesting are the details of the hooks around the eye. In most cases there are four of them, and they are often, as in Figs. 456, 462, turned towards each other and so shaped as to create, in the hollow between them, the traditional figure of an asymmetrical T which is exceedingly common on the flanges of the bronzes. Occasionally the hooks are reduced to two (Fig. 459). — In Figs. 466—469 the arrangement with two combined dragons, one placed upside-down, as in Fig. 455 and following, is broken by a corruption of one of the dragons, certain parts of it being detached.

Figs. 470—482.

Fig. 470 and Pl. 20 = Bone carving from An-yang, Anyō 75; Fig. 471 = Bone = Anyō 82; Fig. 472 and Pl. 20 = Bone, Anyō 84; Fig. 473 = Bone from An-yang, fotogr.; Fig. 474 = Bone, Anyō 82; Fig. 475 and Pl. 20 = Sungchai 10; Fig. 476 and Pl. 20 = Bone, Sirén I, 13; Fig. 477 and Pl. 21 = Senoku, zoku 181; Fig. 478 and Pl. 21 = Bone, Anyō 84; Fig. 479 = Bone, Anyō 75; Fig. 480 = Shierkia, Kie 10; Fig. 481 and Pl. 21, a Tsun vessel, fotogr. (Oeder coll.); Fig. 482 = Senoku 24.

Some of these examples are not from bronzes but from bone carvings, but that is immaterial, since the décor theme is the same on both. In type 470 we find something quite similar to type 457, for instance, though not with two big tail curves but only one, the other being reduced to a Forward-hooked quill. In Fig. 471 there are both curves, but only two hooks on the eye. In the following the dragon bodies are more and more reduced, until finally all sense of the design representing coupled dragons has been lost, and only a conventional figure remaining (Figs. 480, 481). This décor figure, which we have called »Square with crescents» in earlier works, has given rise to much speculation (Hentze thinks it is the picture of a sun and four moon crescents, and draws far-reaching conclusions about lunar symbolism), but a glance at the preceding types, all those from Fig. 453 up to Fig. 474, will suffice to show that the Square with crescents is merely a modification and a violent geometrization of a dragon's eye with its regular four »tufts» or hooks. The rare case of Fig. 482, where the tufts are fashioned as Forward-hooked quills, stresses the fact that we are still in the realm of the quilled dragons.

Figs. 483—502.

Figs. 483 a, b and Pl. 21 = Ackerman 11; Fig. 484 = Freer 5; Fig. 485 = Waterbury 26; Fig. 486 = Senoku 31; Fig. 487 = Senoku 40; Fig. 488 and Pl. 21, a Lei, Photogr.; Fig. 489 = Seikwa 125; Fig. 490 = Kwankarō I: 19; Fig. 491 = Hentze, Pl. 94; Fig.

492 and Pl. 21 = Shūkan 13; Fig. 493 and Pl. 21 = Waterbury 52; Fig. 494 = Yechung III, hia 26; Fig. 495 = Wuying 137; Fig. 496 and Pl. 21 = Seikwa 145; Fig. 497 = Senoku 52; Fig. 498 = Wuying 145; Fig. 499 and Pl. 21 = Hentze, Pl 86; Fig. 500 and Pl. 21 = Senoku 62; Fig. 501 = Ecke Pl. 11; Fig. 502 and Pl. 21 = Antiques 44.

If we start from type 436—465 above and let the upper and the lower parts contact each other at the sides, we obtain a figure like Fig. 483a which gives an impression of a more self-contained single dragon with the eye in the middle, a trunklike nose lowered to the left and a tail raised to the right (483b is more symmetrical). The same idea of a long-drawn-out dragon with an eye in the centre and curved nose and tail predominates in the following types. Figs. 484—486 are typical examples of this, having the eye framed in by a square, (an arrangement with which we are now familiar) and differing only in the margin adornments: sparingly applied tufts (producing the cliché Forward-hooked curve) in Fig. 484, profusely applied tufts in Fig. 485, forming the common »Double-hooks», in some cases even having one of the hooks in the shape of a Forward-hooked quill; in Fig. 486 the bends in the nose and tail are bordered by C-hooked quills. In the richly varied »S-shaped» dragons of this category it is sometimes quite difficult to decide which is nose and which is tail. In Fig. 487 the placing of the eye and the jaw line reveals that the curled-up part to the right is really the nose, and the curled-down part to the left is the tail; in Figs. 488, 489 it is the tail that curls up to the left. In Fig. 488 it is again easy to discern how the long crest in the shape of a C-hooked-quill, like that in type 430, has been linked to the curled-up tail, thus forming a connected whole which gives the impression of a fairly broad body and tail. In Fig. 489 there are extra embellishments: Forward-hooked quills in various places. — The long-drawn S-shaped dragon with eye in the centre which we have just studied (Figs. 483—489) may be reduced or even violently simplified, as in Fig. 490—496. Observe the treatment of the eye, which tallies with that studied in types 453 and following; and, in Figs. 495 and 496, the placing of the lower tuft as a continuation of the tail curve, creating a T figure, just as in types 441 and 462. Sometimes the dragons of our category here are so fancifully embellished as in Figs. 497—498 with Forward-hooked quills etc., that a comparison with simpler types like Fig. 489 is needed in order fully to realize properly the design of the animal. — Finally, there is a small group (Figs. 499—502) with peculiarly shaped dragon heads. In Fig. 499 the nose is drawn-out into along, curled-up trunk, cleft at the end. In the following Figs. 500—502 this trunk proceeds from a bladder-shaped swelling on the forehead of the dragon, and this lump is sometimes so loosely attached to the forehead that one almost has the impression of its being a separate object placed in front of the dragon. Figs. 499, 500 have legs (with spurs, in Fig. 499 a long double-hooked quill), whereas 501, 502 are legless; and the extra adornments are the usual ones: in Fig. 500 a crest in the shape of a C-and-double-hooked quill, and under the tail, also under the trunk, a border forming a Double-hooked quill; in Figs. 499, 501, 502 Forward-hooked quills on the back, and as

borders beneath the trunk; C-hooked quills as border under the body and tail of Fig. 501; and Double-hooks and Foreward-hooked quill under the body and tail of Fig. 502.

In the preceding groups we have repeatedly witnessed how pictures of T'aot'ie-dragons which were primarily fairly »realistic» in the sense that they presented a connected and reasonable image of an animal (albeit a fancy animal) were gradually deformed in one way or another, elements of them being corrupted, detached or eliminated, so that at the end of the evolutionary series there remained only some weird and meaningless clichés. There are many ways in which dragon pictures can be dissolved like this, and in the next group we shall study a few examples of what I have called in earlier works an »Animal triple band», because, in a narrow décor belt, a more or less dissolved T'aot'ie-dragon appears in three horizontal »sub-bands», three »storeys», the upper presenting the horn, the crest, the back adornments and the curved-up end of the tail, the middle one the body proper and the bottom one the mouth, the feet and lower tufts. The dissolution of the picture is often extreme, and only a comparison with our earlier groups makes it possible to recognize the few dragon features still observable.

Figs. 503—533.

Fig. 503 = Freer Pl. 6; Fig. 504 = BMFEA 20, p. 3; Fig. 505 = Seikwa 102; Fig. 506 = Shierkia, Chu 12; Fig. 506a, a Tsun vessel, photogr.; Fig. 507 = Wuying 21; Fig. 508 = Wuying 59; Fig. 509 = Shierkia, Chu 10; Fig. 510 = Wuying 65; Fig. 511 = Chengts'iu 4; Fig. 512 = Shierkia, Shī 4; Fig. 513 = Wuying 59; Fig. 514 = Wuying 73; Fig. 515 = Tsun 1: 25; Fig. 516 = Crown Prince p. 1; Fig. 517 = Seikwa 142; Fig. 518 = Shierkia, Chu 10; Fig. 519 = Sung, Sü 1; Fig. 520 = Shierkia, Shī 5; Fig. 521 = Shierkia, Pu 3; Fig. 522 = Wuying 66; Fig. 523 = Yechung I, shang 27; Fig. 524 = Sungchai 4; Fig. 525 = Chengsung, shang 26; Fig. 526 = Shierkia, King 3; Fig. 527 = Shierkia, Süe 7; Fig. 528 = Sung, Sü 4; Fig. 529 = Sung, Sü 5; Fig. 530 = Hentze, Pl. 39; Fig. 531 = Yechung III, shang 22; Fig. 532 = Sung, Sü 82; Fig. 533 = Sung, Sü 67.

In Figs. 503—506 the dragon picture is still quite clear, but features appear which come to predominate in the following more dissolved types. The vertically placed Forward-hooked quill characterizes many types. In Figs. 507—509 we find it on dragons without legs. The number of quills may vary from one (Fig. 508) to a long row (Fig. 509). The same is true in the following cases, Figs. 510—515, in which we have dragons with legs (in Fig. 515 one single quill). It is sometimes difficult to discern the foot in these dissolved pictures, but by comparison with clear cases it can always be found; it has, as a rule, one raised and three lowered claws, and a curved spur. In the following cases, Figs. 516—529, there are no vertical quills, but various other characteristics. Observe, for instance, in Figs. 519—521, 525, 526 Double-hooks along the back and under the body, placed so as to form series of recumbent C's. Types 516—524 are without legs, types 525—529

have legs. — When the dissolved T'aot'ie-dragon is not confined within the space of a narrow décor belt, it does not take the shape of an »Animal triple band« but may be varied almost indefinitely. Figs. 530—533 afford but a few examples.

In the group Figs. 87—119 above we studied certain types of head-turning dragons. We shall now revert to this theme and examine some other head-turning dragons, which have this in common with some of the types in the preceding group that they have an elongated, more or less S-shaped body. Again, we shall find various kinds of deformations and simplifications.

Figs. 534—555.

Fig. 534 and Pl. 21 = Chengsung, shang 33; Fig. 535 = Tch'ou XIII; Fig. 536 = Kukung 39; Fig. 537 = Wuying 57; Fig. 538 and Pl. 21 = Sung, Sü 40; Fig. 539 and Pl. 22 = Seikwa 118; Fig. 540 = Shierkia, Süe 13; Fig. 541 = Senoku 14; Fig. 542 and Pl. 22 = Sungchai 3; Fig. 543 = Kukung 28; Fig. 544 = Wuying 23; Fig. 545 = Hakkaku 9; Fig. 546 = Seikwa 28; Fig. 547 = Seikwa 27; Fig. 548 = Seikwa 3; Fig. 549 = Trübner 31; Fig. 550 = Wuying 46; Fig. 551 = Seikwa 115; Fig. 552 = Shierkia, Kü 9; Fig. 553 = Kwankarō I: 22; Fig. 554 = Sung, Sü 27; Fig. 555 = Wuying 40.

In Figs. 534—537 the dragons have legs, and behind them the familiar clichés: Backward-hooked curve (534), Forward-hooked curve (535), C-hooked curve (536), C-and-double-hooked curve (537). Similar clichés fill the spaces above the back or (537) in front of the leg: in 536 a C-and-double-hooked quill (in 534 the same but for the first hook's being turned into a Forward-hooked quill); in 535 a C-hooked quill attached to the nose of the dragon; in 537 S-bottomed hooked quills. The crests likewise show the same clichés: in 536 the crest is bordered by a Forward-hooked quill and a C-hooked quill, in 537 it is shaped as a Forward-hooked quill. — In Figs. 538—547 the dragons have no legs but the tail is curved in (in Fig. 538 cleft in one up-turning and one down-turning strand) and ending in a Forward-hooked quill (538—540) or a C-hooked quill (541) or similar figures (542—544); in 546 and 547 the farthest curve of the tail is detached. In all these cases there are the usual clichés as embellishments in various places: C-hooked quill in 538 (attached to the body above and below), C-and-double-hooked quill (540, 541, 543), S-bottomed hooked quill (539, 544, 545) and further variations (546, 547). And again, the crests repeat the same themes: in 538 a coarse and clumsy C-hooked quill (with the point touching the forehead), in 539 and 540 Forward-hooked quill, etc. — In Figs. 548—550 the S band has been purveyed with a dragon's head at each end, still with the same embellishments above and below: S-bottomed hooked quill on 548, 549, and a reduced form of this without hook in 550. — The following simplification is quite interesting. In Fig. 551 there remains only the S band with spirals at the ends (replacing the dragon's heads) and the fillings, here C-and-double-hooked quills. And in Fig. 552 even the central band is lost, only the (fancifully

embellished) C-hooked quills remaining, standing back to back as a result of their placing in the more elaborate preceding figures. We find this idea repeated in Fig. 553: C-and-double-hooked quills (somewhat distorted) placed back to back with a big, detached dragon's eye at the side; similarly in Fig. 554, where the C-and-double-hooked quill is perfectly preserved. — These last cases are very important for upon them are based and from them derive a great number of more or less triangular back-to-back figures in the décor bands on early Chou and Middle Chou bronzes (e. g. Sung, Sü 39; Wuying 37; Tsun 2: 35; Senoku 188; Wuying 88; Sung, Sü 45). — Finally, Fig. 555 may be adduced as an example of an unusual and fanciful variation of the principal theme of our group.

In the following groups we shall witness how the dragon is inscribed in one of the most common décor figures: the Blade (rising blade or hanging blade).

Figs. 556—581.

Fig. 556 = Crown Prince p. 9; Fig. 557 and Pl. 22 = Freer 18; Fig. 558, a Tsun vessel, photogr.; Fig. 559 = Kukung 26; Fig. 560 and Pl. 22, a Tsun vessel, photogr.; Fig. 561 = Seikwa 14; Fig. 562, Axle cap, photogr.; Fig. 563 = Freer 4; Fig. 564 and Pl. 22 = Koop 5; Fig. 565 and Pl. 22, a Kuei, photogr.; Fig. 566 = Senoku 24; Fig. 567 and Pl. 22, a Tsun vessel, photogr.; Fig. 568 = Senoku 22; Fig. 569 and Pl. 22 = Seikwa 13; Fig. 570 and Pl. 22 = Freer 25; Fig. 571 = Hakkaku 5; Fig. 572 = Mengwei, Sü 27; Fig. 573 = Freer 1; Fig. 574 and Pl. 22 = Waterbury 39; Fig. 575 = Wuying 137; Fig. 576 and Pl. 23 = Seikwa 67; Fig. 577, a Ku, photogr.; Fig. 578 = Anyō 37; Fig. 579 = Waterbury 73; Fig. 580 and Pl. 23 = Senoku 87; Fig. 581, a Kia, photogr.

There are always two dragons, placed antithetically, each dragon filling up one half of the blade, with the body and tail running closely parallel to the outer contour of the blade, the effect being that the two dragon's tails meet at the point of the blade. Sometimes the dragon alone constitutes the filling of the blade half (e. g. Fig. 559, 561 etc.), sometimes a cicada is inserted at the end of the blade, with the tail at the point where the dragon's tails meet (Figs. 556, 568, 573, 574, 577), sometimes it is merely suggested by a simple triangle placed in the same position (e. g. Fig. 560, 562, 563 etc.). Some dragons are legless (Figs. 557—560, 563, 565, 567, 575, 577, 578, 581), the rest have the typical leg and foot with one raised claw. Both on the under side and on the upper side of the elongated body there are tufts of the same kinds (Forward-hooked, Backward-hooked, C-hooked, Double-hooked) which we have found to be ubiquitous elements in the preceding dragon groups. Sometimes, though rarely, an independent cliché is applied as filling for an empty space, e. g. an S-bottomed hooked curve in Fig. 557. On the nape of the neck of some dragons there is a figure, either C-shaped (Figs. 565, 568, 573, 574) or T-shaped (Figs. 563, 566, 569, 575, 576, 580) or a detached circle (Figs. 561, 567, 570), which, to judge from cases such as Figs. 568, 573, is fundamentally intended to be an ear. On the forehead of most of the dragons there is a hook, which is occasionally el-

borated into a Forward-hooked quill (557, 558). Behind the horn of the dragon there is often a crest, in Fig. 563 simply a C shape, but in most cases in the form of a C-hooked quill (Figs. 564—567, 571, 573) or an Forward-hooked quill (Figs. 568—570, 574). But then there arises a curious phenomenon. This crest is first drawn-out into a long quill which rises far above the head (Fig. 575) or it is curved at the end and provided with an upper border in the shape of a C-hooked quill (Figs. 576, 577). It has now come to have so close a resemblance to an elongated dragon body, with curled-up tail and adorning border (cf. the type in Fig. 73 above) that the temptation grew too strong, and this false extra body was furnished with the tufts on the under side proper to the regular dragon types (Fig. 578—580); so that in these cases the dragon head has two bodies, the one raised vertically and the other descending to the point of the blade. Finally, this double-bodied dragon picture was dissolved into two: the upper body remained as pertaining to the original head; but the lower body, which runs down to the point of the blade, was provided with a new extra head (Fig. 581).

The two antithetical dragons in the blades just studied are so placed that they give sometimes rather a remote, sometimes quite a strong impression of a T'aot'ie; see for instance Fig. 563. Now, if they are drawn close together and allowed to coalesce, the result will be an unadulterated T'aot'ie, and this leads to a new and interesting group:

Figs. 582—600.

Fig. 582 and Pl. 23 = Seikwa 68; Fig. 583 and Pl. 23 = Freer 4; Fig. 584 and Pl. 23 = Seikwa 45; Fig. 585 = Loo 1940: 16; = Anyō 79 (bone); Fig. 587, a Ku, fotogr.; Fig. 588 = Seikwa 29; Fig. 589 and Pl. 23 = Waterbury 14; Fig. 590 = Wuying 135; Fig. 591 = Yechung III, shang 43; Fig. 592 = Wuying 138; Fig. 593 = Ecke 13; Fig. 594 = Cull p. 26; Fig. 595 and Pl. 23 = Waterbury 27; Fig. 596 = Chengts'iu 41; Fig. 597 = Paoyün 102; Fig. 598 = Shūkan 25; Fig. 599 = Shierkia, King 6; Fig. 600 and Pl. 23, a Ku, fotogr.

In Figs. 582, 583 each half of the blade presents a dragon very closely akin to those studied in Figs. 579, 580 in the preceding group, but the face of the dragon is not free and independent but forms part of a real T'aot'ie face. In Fig. 584 the dragon body is detached from the head, which forms one half of a T'aot'ie head. The same is true of Fig. 585, in which, moreover, the dragon body is divided into two parts (the lower of which has a shape to be discussed presently). Fig. 586 shows a T'aot'ie head frankly liberated from all dragon accessories, yet retaining the bottom triangle which, as we saw in an earlier group, suggests a cicada. The following cases (Figs. 587—591) are interesting: whereas in types 583, 584 the coalesced parts of the dragons are the heads proper, including the eyes, so that the T'aot'ie head is contained in the resultant transverse band, our types 587 and following have lost the purpose of the transverse band, retaining it merely as a basis from which the vertical adorned crests rise, and the T'aot'ie face has become detached from it: eyebrows and eyes are added below and detached from the band.

Beneath the eyes comes the V-shaped figure the origin of which we have just studied: a comparison with types 570, 579 and 582 at once reveals that it is the bodies and tails, with tufts, in the shape of a C-hooked quill, of the two antithetical dragons, which coalesce at the point of the blade; here in 587 they are detached and have the upper outer ends drawn out into points, so as to modify the cliché from having C-hooked quills into having S-bottomed hooked quills. In the lower middle there is still, in some cases, the triangle that represents the cicada. — In Fig. 592 the transverse band is again severed and converted into a pair of »S-bottom» figures. In Figs. 593—600 the tall vertical head crests are commuted into more or less elongated horns on the T'ao'ie, and the latter is further elaborated: below the eyes there are two hook-like figures placed back to back, and which are, in fact, the drawn-up lines of the monster's mouth, strongly simplified (easily recognized in Fig. 597). And below all this we again have the more or less elaborate V-like figure just analysed above (bodies and tails, with tufts, of two antithetical dragons). In Fig. 599 the horns have dragons inscribed, and in Fig. 600 the T'aot'ie has been provided with two legs, placed above the V-figure.

In the following groups the dragons and T'aot'ie are entirely lost, only remnants and vestiges remaining of the original composition:

Figs. 601—625.

Fig. 601 and Pl. 23 = Kwankarō II: 13; Fig. 602 = Seikwa 89; Fig. 603 = Seikwa 44; Fig. 604 and Pl. 24, a Square Ting, fotogr.; Fig. 605 = Yechung III, shang 16; Fig. 606 and Pl. 24 = Seikwa 31; Fig. 607 = Yechung III, hia 10; Fig. 608 = Anyō 82 (bone); Fig. 609 = Freer 10; Fig. 610 and Pl. 24 = Senoku 30; Fig. 611 = Seikwa 52; Fig. 612 = Chengts'iu 40; Fig. 613 = Seikwa 58; Fig. 614 and Pl. 24 = Exhibition 15; Fig. 615 and Pl. 24 = Waterbury 38; Fig. 616, a Hien, fotogr.; Fig. 617 and Pl. 24, a Ting, fotogr.; Fig. 618 = Seikwa 11; Fig. 619 = Yechung III, shang 46; Fig. 620 = Crown Prince p. 5; Fig. 621 = Chengts'iu 11; Fig. 622 = Ackerman 14; Fig. 623 = Shuangkien, shang 29; Fig. 624 = Wuying 6; Fig. 625 = Seikwa 66.

In Fig. 601 there is still the bipartite drawing: horns and bodies (in principle the same, though violently simplified, in Fig. 602). In Figs. 603—613, the whole picture is reduced to the V already explained above (connected dragon bodies, with tufts) formed into the traditional clichés C-hooked quills (joining at the end) or S-bottomed hooked quills. In Fig. 613 the V is extremely reduced. Observe the cicada in Fig. 610, like that in Figs. 568 etc. above. When we come to types 614—625 the picture again becomes more elaborate. In Fig. 614, above the V, i. e. the joined dragon bodies fashioned as C-hooked quills, the artist has applied the crest (again in the shape of a C-hooked quill, cf. Figs. 576 and foll.) which stands as *pars pro toto* for a dragon head. This theme has been more or less simplified in the following: in Fig. 615, the C-hooked quill of the crest has coalesced with the top of the C-hooked quill of the descending dragon body; in Figs. 616—619 it has been further reduced to a Forward-hooked quill. Yet all the time the artist seems to

have remained aware of the fundamental idea of the crest: that of an abbreviation for a dragon's head, for in Figs. 616, 617 he has added an ear (T-shaped in Fig. 616, circular in Fig. 617, cf. Figs. 566, 567 above) placed behind and below the head crest and therefore happening very ineptly to sit at the back of the big C-hooks which originally formed the tufts under the dragon body! In Fig. 624 the picture of the confronting dragon bodies (C-hooked quills) is schematized in the extreme.

Figs. 626—640.

Fig. 626 and Pl. 24 = Waterbury 1; Fig. 627 = Shierkia, Chu 5; Fig. 628 = Seikwa 88; Fig. 629 and Pl. 24 = Yechung III, shang 9; Fig. 630 and Pl. 24 = Yechung II, shang 24; Fig. 631 and Pl. 24 = Waterbury 2; Fig. 632 = BMFEA 6: 1; Fig. 633 = Exhibition 18; Fig. 634 = Kukung 3; Fig. 635 = Seikwa 27; Fig. 636 = Chengts'iu 27; Fig. 637 = Kukung 40; Fig. 638 = Seikwa 40; Fig. 639 = Crown Prince p. 9; Fig. 640 = Ostasiat. Zeitschr. 22: 91.

We have seen many instances of a cicada being inscribed in the end of the blade, with the tail turned towards the point. Now there is a group in which there is neither a dragon nor a T'aot'ie but where the entire principal surface of the blade is occupied by a cicada. In some cases (e. g. Figs. 626, 627) quite realistic, then gradually becoming more and more stylized, dissolved and simplified (Figs. 628—633). — At the end (Figs. 634—640) I have placed a few examples of more unusual and eccentric blade fillings. In Figs. 634—636 we find our clichés C-and-double-hooks, Double-hooks and (Fig. 635) S-bottomed hooked quill; Figs. 634, 635 show the circle at the nape of the neck which, as we have seen above, represents an ear. Figs. 638—640 show a combination of T'aot'ie and cicada. Some more exceptional and very curious blade fillings are to be found, for instance, in Senoku 32, and in Seikwa 17, 30 and 64.

* * *

The preceding survey of the most common dragon and T'aot'ie-dragon types has given an ample number of examples of the curious mechanization of the décor elements: in the shaping of the animals there is everywhere a tendency to fall into one or other of a few clichés which have become the standard »form words», the *formantia* in the grammar of the early bronze décor. But further some of these clichés (and quite particularly the C-hooked quill) have obtained an even wider use. They have, as we shall see, been exploited to a large extent, even being detached from their original dragon context, and serve as independent décor elements.

We have already witnessed the first steps in this direction in the groups described above:

The C-hooked quill, for instance, which originated from the drawing of two bottom tufts and a tail quill (Figs. 45—60, 161—171) was first applied to places where the »C-hooked» figure has really no meaning at all from a pictorial point of

view: as crest, e. g. Figs. 21, 22 (common); as appendix on a curled-up tail, e. g. Figs. 73, 156; as border band on back or tail or horn or crest, e. g. Figs. 121, 195, 308, 314, 315, 576; as forehead adornment (on elephant) Fig. 641; as ear of a T'aot'ie e. g. Hakkaku 20. The Forward-hooked quill occurs as a forehead adornment in Fig. 293, as border band on the horn in Fig. 293 and as legs (on an elephant) Fig. 641. The Backward-hooked quill appears as a forehead adornment in Fig. 120. The C-and-double-hooked quill occurs as a border band on a horn in Fig. 315. The S-bottomed hooked quill occurs as a forehead adornment in Fig. 195.

The next step is that these clichés appear entirely detached from the dragon figure, but so close to it as still to give an impression of being logically connected with it; they have then mostly the function of filling gaps (empty spaces, angles), so as to round off the picture into a more continuous whole. As such a detached filling we find, for instance, the C-hooked quill in Figs. 85, 352, 354, 397, 408, 447; the S-bottomed hooked quill in Figs. 86, 396, 447, 537, 544; the C-and-double-hooked quill in Fig. 551.

Finally — and this is exceedingly important — some of these clichés occur entirely independent of a dragon picture, quite alone as a theme of the principal décor. In Pl. 2 a (= Freer 13) we observe an independent C-hooked quill on the spout and two S-bottomed hooked quills below the spout. Pl. 7 a (= Waterbury 54) is a fine example of the same S-bottomed hooked quill standing all by itself. In Pl. 7 b (= Waterbury 35) there are three, two of them back to back. In Pl. 1 c (= Waterbury 7) we find a more elaborate variant of the same cliché, in front of the leg. Pl. 8 c (BMFEA 6: 2) shows another variation (cf. below) of the same theme. Again we find the S-bottomed hooked quill beautifully placed as a principal décor theme in Pl. 8 b (= Crown Prince 104) and Pl. 8 a (photogr.), and in Pl. 13: 243 we find it doubled in the middle of a belt. In Pl. 5 a and b (Yechung I, shang 47 and 50) we have two C-hooked quills. In Pl. 5 c (photogr.) there is a small C-hooked quill all by itself in the upper corner. The list could easily be extended. If we compare the figures just quoted with the T'aot'ie-dragon bodies studied in Figs. 362—392, we realize at once that they are simply abbreviations, they stand *pars pro toto* to mean »T'aot'ie-dragon». (Since the Fig. 642 is so common in this function it might be tempting to see in the Fig. 643, which is so extremely common on T'aot'ie horns (in the décor) and on the segmented flanges of various classes of ritual vessels, a further simplification, meaning likewise »dragon»; but this may be a too bold speculation).

We can then understand why some of these clichés have come to be used as inner décor, executed in incised lines of the bands and surfaces in relief which constitute the principal décor. It is mainly the C-hooked quill which in this function competes with or rather supplements, the common C and T spirals. When fulfilling this function it is often somewhat distorted, in that the »blade»-like part of the quill is modified in one or other of the ways shown in Figs. 644, 645 or it is reduced to a simple line: Fig. 646. Our Pl. 7 a (Waterbury 54) shows, on the owl's tail, both

variants 644 and 646. In Fig. 647 (Wuying 14, rubbing) there are C-hooked quills as incised fillings both on the T'aot'ie's nose ridge, to the right of his eye and (in variant 645) on the vertical dragon. In Fig. 648 (Wuying 52, rubbing) the dragon has on his body a typical Fig. 645 (an ordinary C-hooked quill on the tail, curved because of the placing). In Fig. 649 (Ecke 4, rubbing) there are, on the T'aot'ie-dragon's body, two of type 644 and, curiously, two more in opposite directions but coalesced so as to have the C in common.

Further we come to a most interesting décor element: what I have called in my earlier works the «hooked forehead shield» of the T'aot'ie. We have it in two principal variants, Figs. 650 and 651. This symbol is very frequent as an abbreviation for a T'aot'ie, a *pars pro toto* showing only the monster's forehead, nose and rolled-up nostrils. As such an abbreviation we have it very unambiguously in Wuying 54: On the same Kuei we find the T'aot'ie head in the neck belt (Fig. 652), and the forehead shield, in an identical function, in the foot belt (Fig. 653). The rolled-up hooks at the bottom invariably, when the shield occurs in a complete T'aot'ie face, form the nostrils of the monster, and it is easy to realize that in the design of figure 650 the two hooks on the upper part may have been intended to suggest eyebrows as for instance in Fig. 654, also Pl. 24, in which the nose and forehead form Fig. 655, very closely similar to Fig. 650. But that is by no means the whole truth, for in innumerable cases there are both the hooks of the forehead shield and (separate from them) clearly drawn eyebrows, e. g. Pl. 6 b (= Tsun 1: 26). Hentze, on the other hand, insists that this shield is a schematic representation of a cicada; there is something in this suggestion too, for in depicting some variants of the cicada the ancient artist drew upon the common clichés, in that he formed its legs as either C-hooked quills or Double-hooked quills (see Hentze, *Sakralbronzen*, Pl. 93), and it may well be — since we have witnessed the frequent combinations of dragon and cicada in the Blades (e. g. Figs. 556, 568, 573), that the artist has intended a kind of magical «pun», in that the figure at the same time depicts the centre of a T'aot'ie-dragon's face (nostrils, ridge of the nose, eyebrows and forehead above the nose) and suggests a cicada. But whatever the intended association of ideas may have been, this much is certain, that this centre of a T'aot'ie-dragon's face (often used alone as *pars pro toto*, as just pointed out) is shaped so as to be made up of two C-hooked quills (i. e. dragon symbols) placed back to back, or of two C-and-double-hooked quills (likewise dragon symbols) placed in the same way. This is very easy to realize in our Pl. 6 b (= Tsun 1: 26) in which the former alternative is particularly clear, see Fig. 656, in which, moreover, the C-hooked quill is repeated as incised filling. Here, indeed, the dragon idea is repeated almost *ad nauseam*: firstly, there is the complete T'aot'ie face; secondly this is flanked by vertical dragons so placed as to suggest or even represent a (detached) T'aot'ie-dragon's body; thirdly, the centre of the face shows a «hooked forehead shield», in itself a sufficient short-form for a T'aot'ie-dragon; fourthly, this shield is made up of two C-hooked quills, each in itself being a short-form for

»dragon»; and fifthly, there are incised on this latter C-hooked quills, i. e. short-forms for »dragon».

It stands to reason that this accumulation of dragon symbols is not a freak of the artist's but has a most serious and definite meaning. The dragon, in the ritual décor, is a powerful magical symbol, and its accumulation was evidently meant to load the sacred vessel with a great dragon force, an enormous magical power. This, then, is merely one of the very frequent cases in which some part of a T'aot'ie-dragon's figure is formed as a complete dragon, thus enhancing in itself the dragon power of the principal dragon. It is quite common for the horn of a T'act'ie to represent a complete dragon (e. g. our Figs. 266, 288, 303, 325). In our Pl. 6 a (= BMFEA 21: 11) we have an owl vessel with a T'aot'ie-like face on the lid, in which the eyebrow is in the shape of a gaping dragon. Again, in Waterbury, Pl. 44, there is a bone carving (our Fig. 209 and Pl. 13) with a large finely cut dragon, the front leg of which is itself a well-executed small dragon. The underlying idea in all these cases is evidently one and the same: the accumulation of dragon elements enhances the magical power of the décor on the sacral vessel.

* * *

As a postscript it may be useful to add some examples of the dragon motif in the Middle Chou style. Here the dragon is still one of the predominant features in the filling of the décor bands, particularly the neck band of the vessels (called »Broad figured band» in my article *Yin and Chou in Chinese Bronzes*, 1935), but in this style, descendant and heir of the Yin art, the dragon figures are so violently reduced and corrupted that they are often practically no more than conventional figures apparently without meaning.

Figs. 657—679.

Fig. 657 = Shuangkien, shang 29; Fig. 658 and Pl. 25 = Chicago 34; Fig. 659 and Pl. 25 = BMFEA 21: 21; Fig. 660 and Pl. 25 = Wuying 88; Fig. 661 = Senoku 100; Fig. 662 and Pl. 25 = Kwankarō I: 41; Fig. 663 = Shierkia, Kü 15; Fig. 664 = Wuying 100; Fig. 665 = Wuying 100; Fig. 666 and Pl. 25 = Shierkia, Kü 16; Fig. 667 and Pl. 25 = Sung, Sü 48; Fig. 669 = Wuying 103; Fig. 670 and Pl. 25 = Chicago 33; Fig. 671 = Shant'u 77; Fig. 672 = Seikwa 160; Fig. 673 and Pl. 25 = Yenku'u, shang 9; Fig. 674 and Pl. 25, a Chung, fotogr.; Fig. 675, a Li, fotogr.; Fig. 676 = Chengsung, shang 1; Fig. 677 = Shierkia, Kü 18; Fig. 678 and Pl. 25 = Ackerman 45; Fig. 679 = BMFEA 6: 19.

In Figs. 657, 658 it is still possible to recognize the dragon: the head with eye, curled-up lower jaw, beak, head-crest, rolled-up tail. But in Fig. 659 and the following this picture has already been schematized into an S figure with the eye in the very centre, surrounded by 4 hooks closely reminiscent of those in Figs. 453 and following figures mentioned above. In Fig. 664 the space inside the two loops of the S is filled out with C-hooked curves. In Figs. 665 and following the hooks

around the eye are further reduced. In Fig. 669 two additional eyes are applied to the loops of the S, and in Fig. 670 the eyes are definitely removed from the centre, and each end of the S forms a well-defined dragon head (in 671 this symmetry is again disturbed). Figs. 672, 673 show other variations of the same S-dragon theme. In Fig. 674 and following it is frankly reduced to a mere S figure, varying slightly in regard to embellishing tufts.

Figs. 680—701.

Fig. 680 and Pl. 25 = Loo 1940: 23; Fig. 681 = Shant'u 34; Fig. 682 and Pl. 25 = Wuying 74; Fig. 683 and Pl. 25 = Tsun 2: 22; Fig. 684 and Pl. 26 = Shukan 14; Fig. 685 = Sung, Sü 15; Fig. 686 and Pl. 26 = Tsun 2: 17; Fig. 687 and Pl. 26 = Shierkia, Kü 6; Fig. 688 = Chicago 38; Fig. 689 = Sung, Sü 48; Fig. 690 = Shierkia, Pu 2; Fig. 691 = Shierkia, K'i 28; Fig. 692, a Ting, fotogr.; Fig. 693 = Seikwa 157; Fig. 694 = BMFEA 21: 20; Fig. 695 and Pl. 26 = Shuangkien, shang 8; Fig. 696 = BMFEA 21: 19; Fig. 697, an Ih, fotogr.; Fig. 698 and Pl. 26 = Shierkia, Süe 11; Fig. 699 = Mengwei 30; Fig. 700 = Wuying 24; Fig. 701 and Pl. 26 = Shuangkien, shang 21.

In Figs. 680—682 and following the S figure with the eye in the centre (as in the preceding group) has been broken into two halves, so that the eye is encased between two intergripping C's (these latter are adorned with hooks in varying patterns). In the Figs. 684—690 even the eye is lost (in Fig. 685 replaced by a central S figure), and, finally, in Fig. 691 even the C's are eccentrically modified. — In Fig. 692 and following, the dragon is no longer the S-shaped type, but C-shaped, the tail being curved up and back towards the head. Whereas the picture is still quite clear in Fig. 692, it is corrupted through a displacement of the eye in Figs. 693—696, and in the following the eye is lost altogether. They have still something of the dragon shape preserved in the formation of the C, except the last, Fig. 701, in which the simplification has led up to a totally schematic C figure with tufts.

Figs. 702—715.

Fig. 702 and Pl. 26 = Shant'u 91; Fig. 703 = Kukung 19; Fig. 704 = Shierkia, Kü 19; Fig. 705 = Shierkia, K'i 21; Fig. 706 = Sungchai 2; Fig. 707 and Pl. 26 = Tsun 1: 21; Fig. 708 and Pl. 26 = Kwankarō I: 9; Fig. 709 and Pl. 26 = Tsun 2: 4; Fig. 710 and Pl. 26 = BMFEA 21: 4; Fig. 711 and Pl. 26 = Ecke 18; Fig. 712 = Kukung 6; Fig. 713 = Ackerman 53; Fig. 714 = Shierkia, Kü 9; Fig. 715 and Pl. 26 = Sung, Sü 27.

In Figs. 702—710 we are brought back to the dragon with a well-defined eye and a curled-up tail, but the picture is broken by the parts of the body being detached from one another and it is complicated by various additional embellishments. C-hooks, C-and-double-hooks etc., the various clichés with which we are now familiar. In empty spaces we likewise find variants of these same clichés as fillings. In spite of the distortions, therefore, it is easy to realize the intimate connection of these Middle-Chou décor figures with the Yin-time prototypes. In Figs. 711—713 the eye of the dragon is lost, but otherwise the drawing is analogous to the preceding.

Finally, Figs. 714, 715 illustrate to what length the Middle-Chou artist would sometimes go in playing upon the traditional themes and building up elaborate figures, deriving from the tail-raising dragon, yet so exceedingly stylized and distorted that the historical connection is recognizable only in the light of the analysis in the preceding groups.

ABBREVIATIONS:

Most of the abbreviations are the same as those listed in BMFEA vol. 9, 1937, p. 12. To these should be added:

- Ackerman = Ph. Ackerman, *Ritual Bronzes of ancient China*, 1945.
Anyō = S. Umehara, *Kanan Anyō ihō* 1940.
Chicago = C. F. Kelley and Ch'en Meng-chia, *Chinese Bronzes from the Buckingham Collection*, Chicago 1946.
Crown Prince = *Selected Chinese Antiquities from the Collection of Gustaf Adolf, Crown Prince of Sweden*, Stockholm 1948.
Cull = W. P. Yetts, *The Cull Chinese Bronzes*, London 1939.
Ecke = G. Ecke, *Frühe Chinesische Bronzen aus der Sammlung Oskar Trautmann*, Peking 1939.
Freer = *A descriptive and illustrative Catalogue of Chinese Bronzes, . . . compiled by the Freer Gallery of Art*, Washington 1946.
Hentze = C. Hentze, *Die Sakralbronzen und ihre Bedeutung in den frühchinesischen Kulturen*, Antwerpen 1941.
Kukung = Ku kung, Peking 1929 ff.
Kwankarō = S. Umehara, *Kwankarō kikkizu*. 1947.
Loo 1939 = *An Exhibition of Chinese Bronzes*, New York 1939 (C. T. Loo & Co.)
Loo 1940 = *An Exhibition of ancient Chinese ritual Bronzes*, Detroit 1940 (C. T. Loo & Co.)
Palmgren = N. Palmgren, *Yinstil-Studien. Ostas. Zeitschr.* 1936.
Seikwa = S. Umehara, *Shina kodō seikwa*, 1933.
Shang Chou = Jung Keng, *Shang Chou yi k'i t'ung k'ao*, Peking 1941.
Sirén = O. Sirén, *A History of early Chinese Art*, London 1929.
Sung, Sū = Jung Keng, *Sung chai ki kin sū lu*, Peking 1938.
Sünhien = Sun Hai-po, *Sün hien yi k'i*, Peking 1938.
Visser = H. F. E. Visser, *Asiatic Art in private Collections of Holland and Belgium*, Amsterdam 1948.
Waterbury = Florence Waterbury, *Early Chinese Symbols and Literature, Vestiges and Speculations*, New York 1942.
White = W. C. White, *Bone Culture of Ancient China*, Toronto 1945.
Yenk'u = Liang Shang-ch'un, *Yen k'u ki kin t'u lu*, Peking 1944.



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3 a



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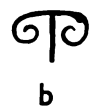
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4 a



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5 a



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c



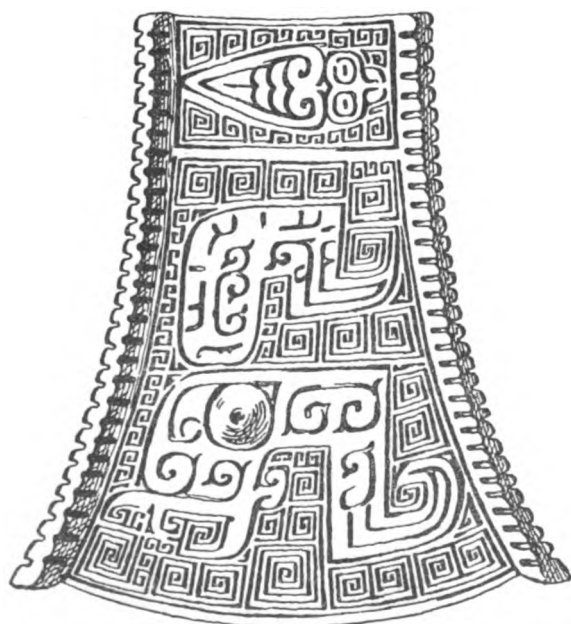
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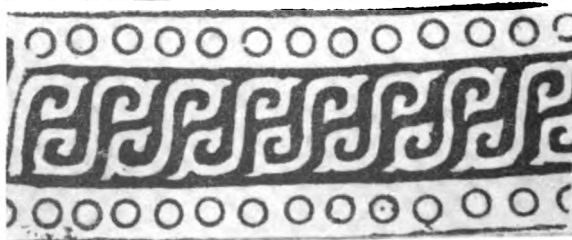
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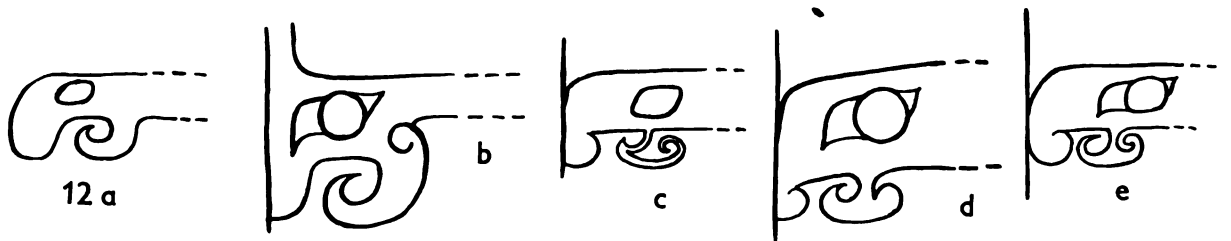
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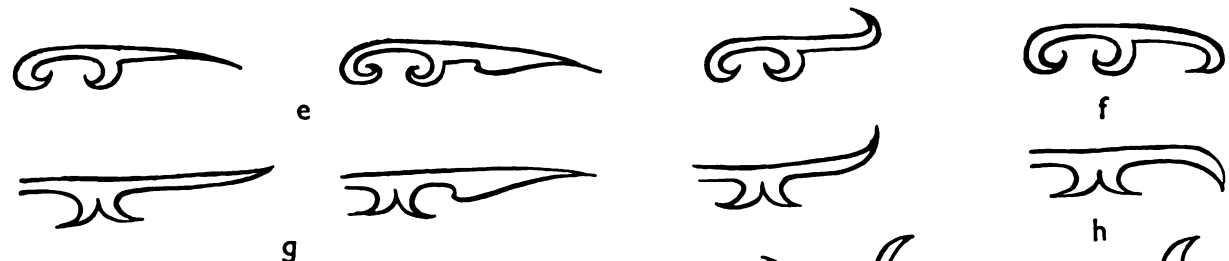
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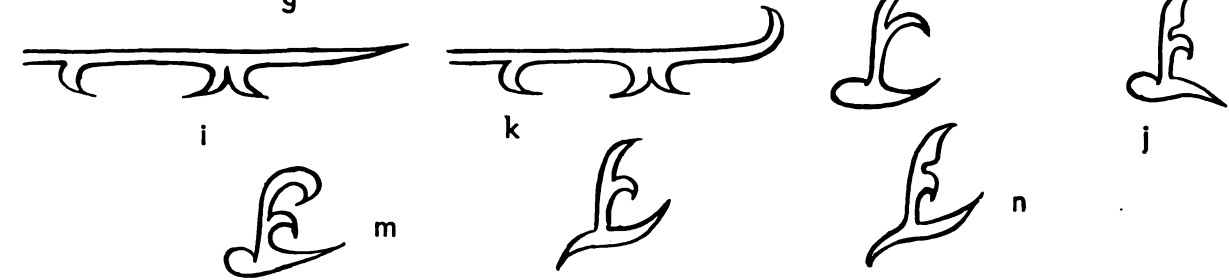
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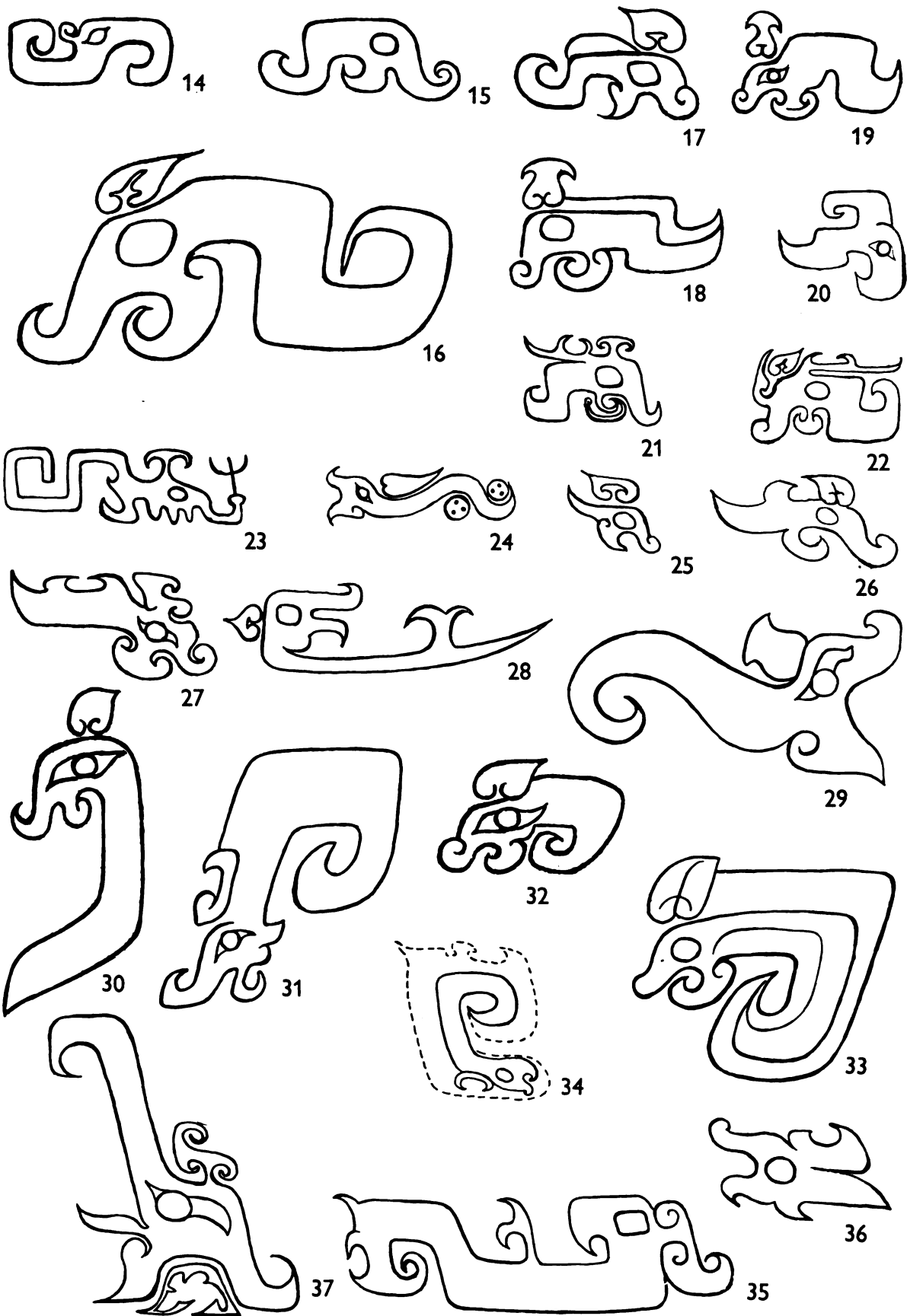
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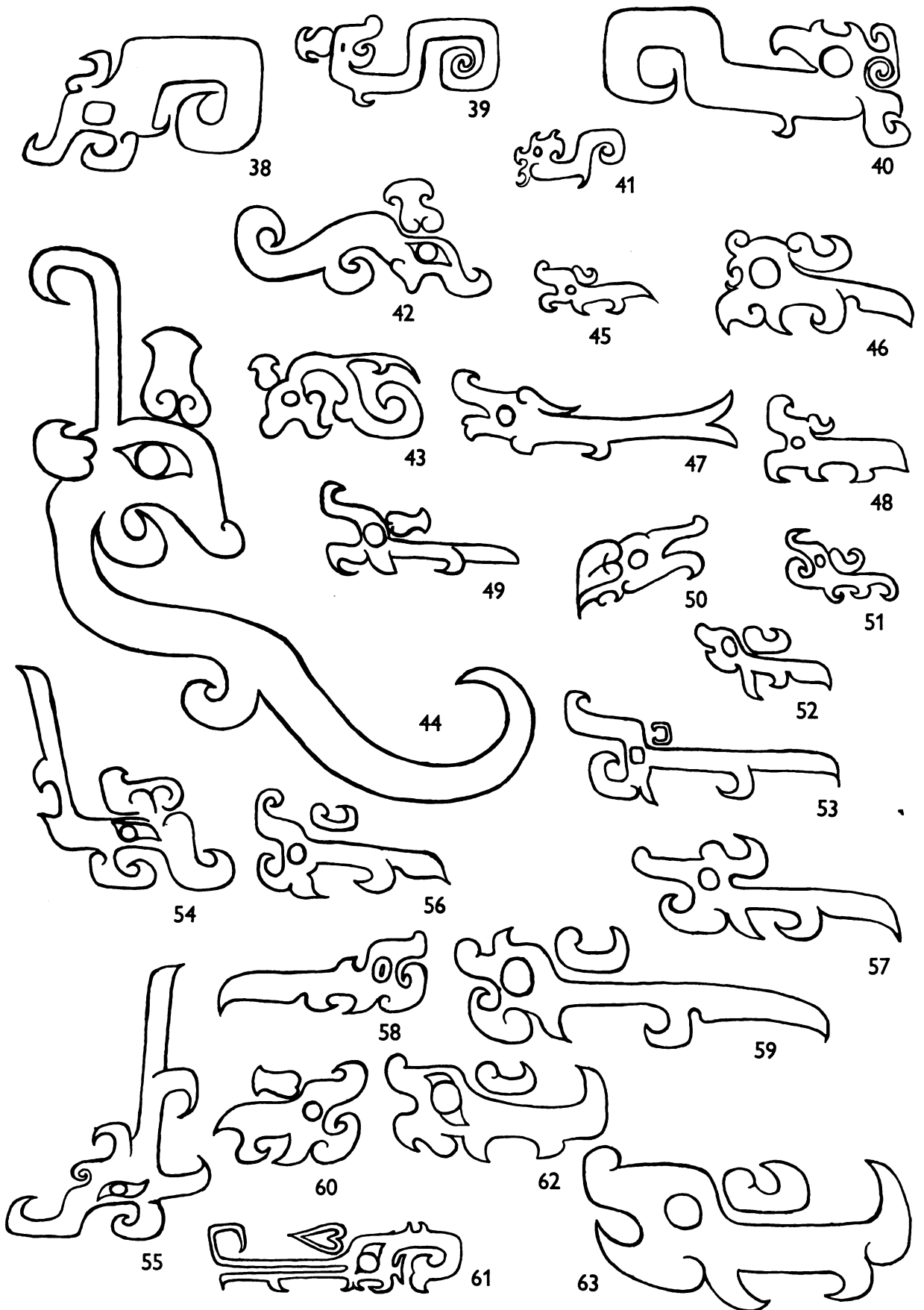
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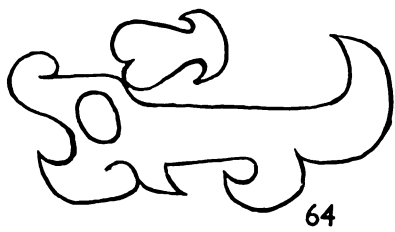
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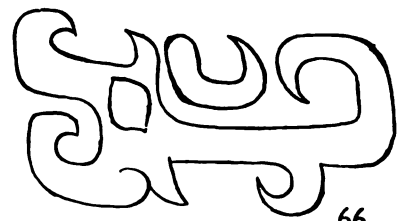




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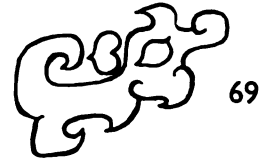
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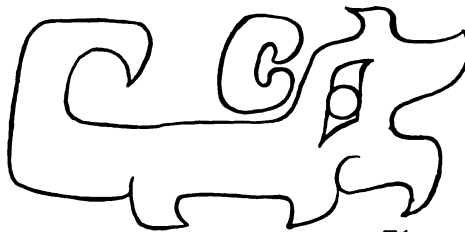
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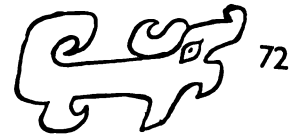
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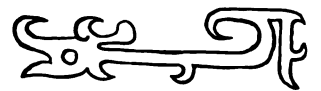
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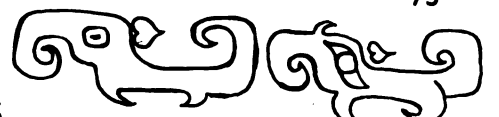
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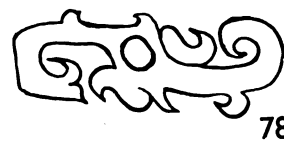
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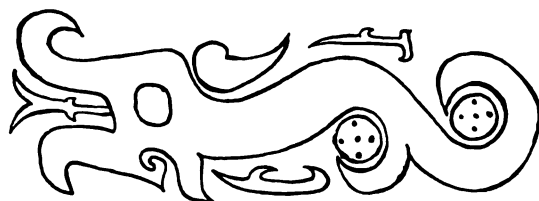
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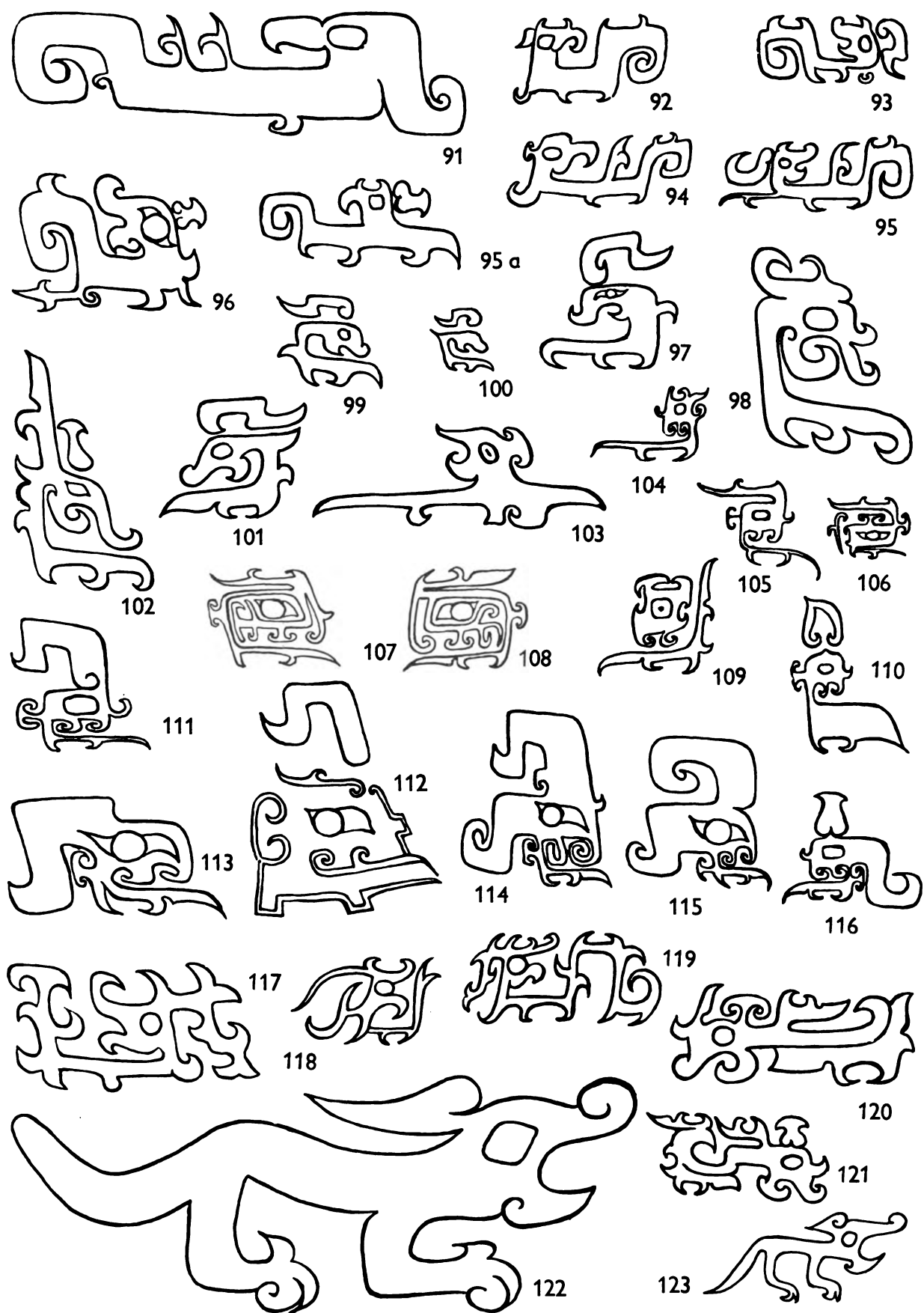
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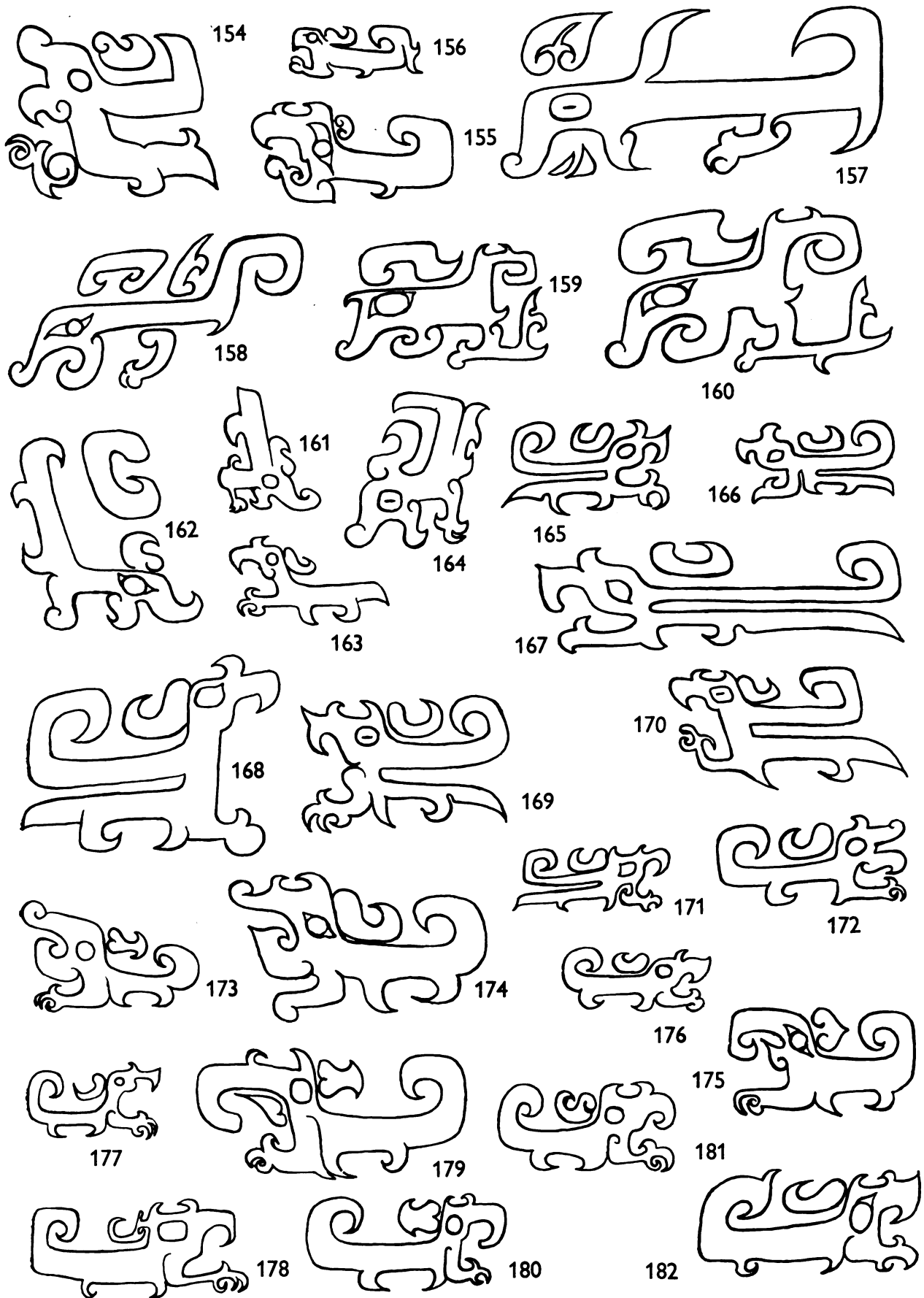
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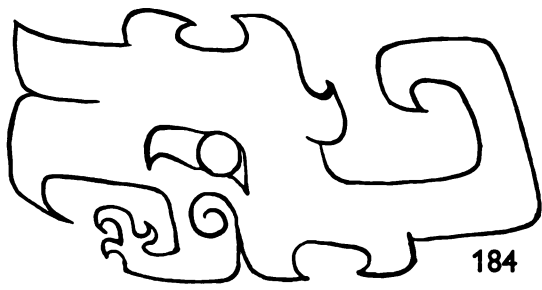


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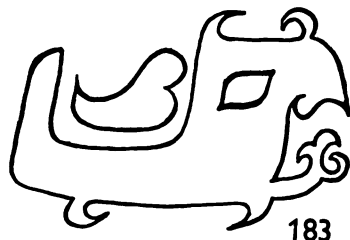








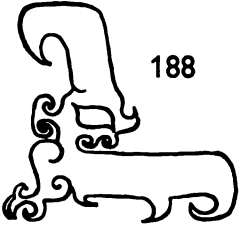
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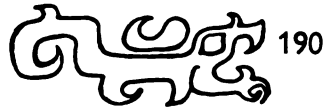
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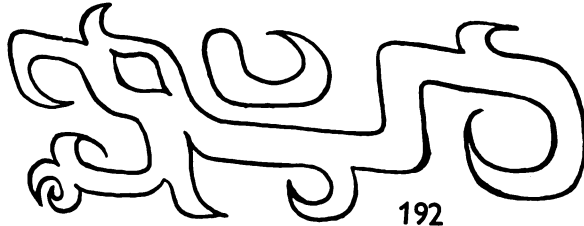
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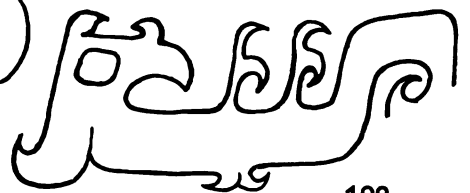
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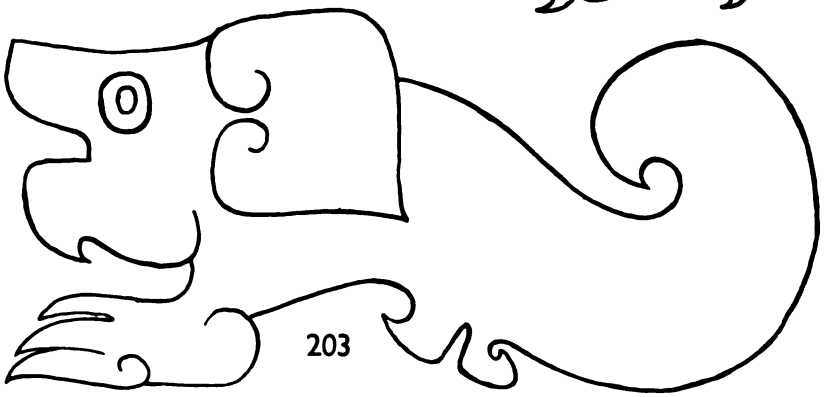
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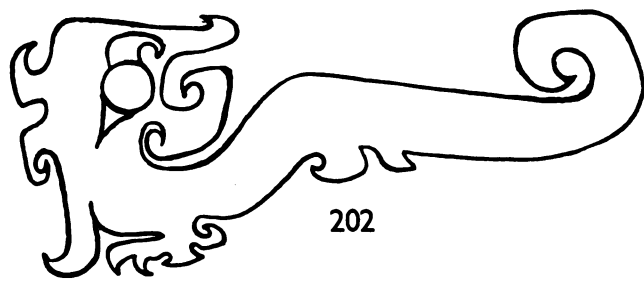
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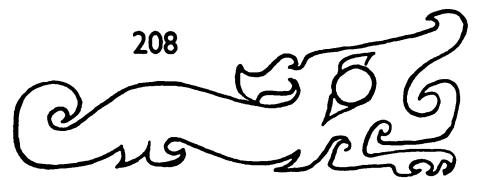
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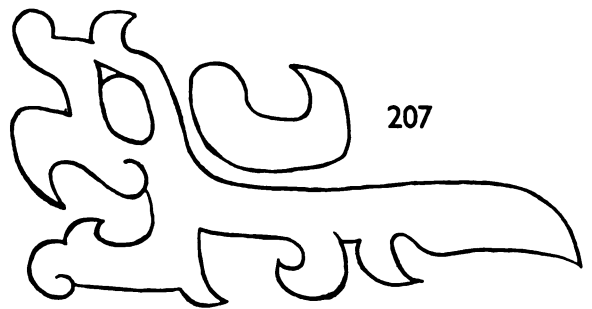
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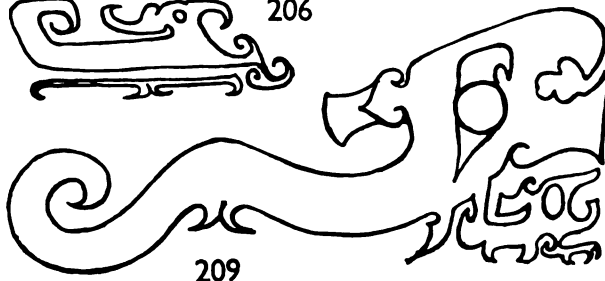
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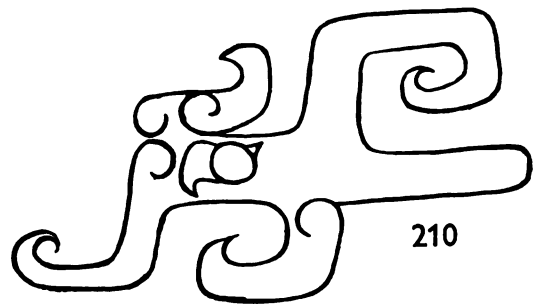
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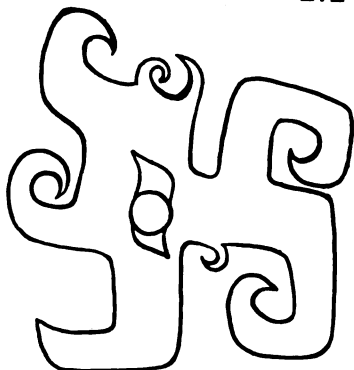
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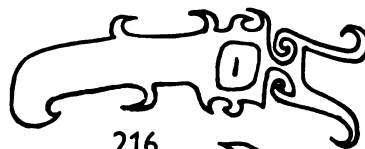
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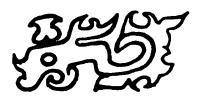
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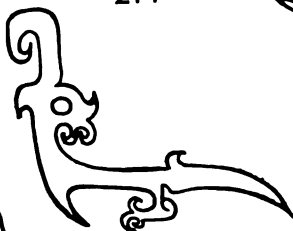
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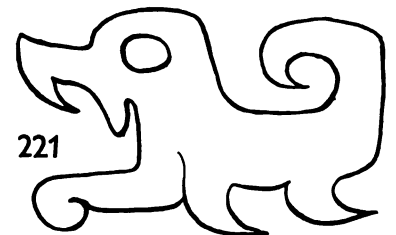
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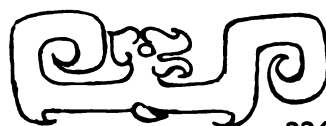
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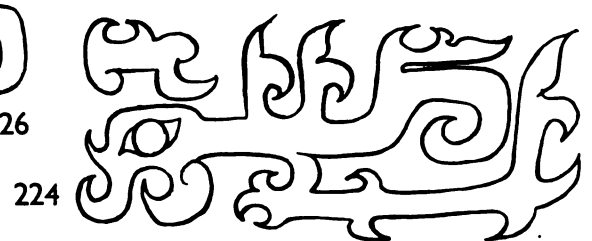
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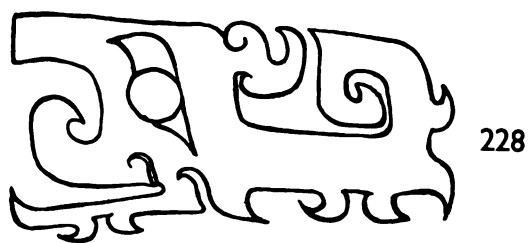
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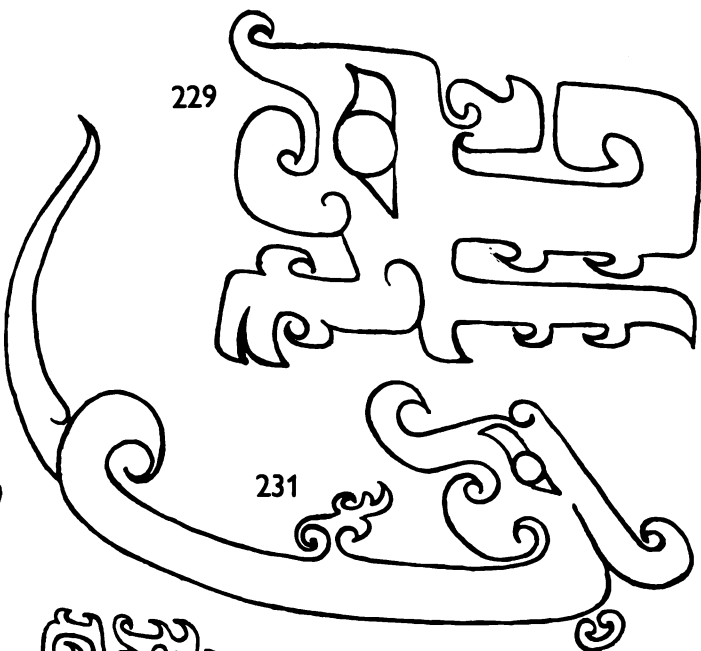
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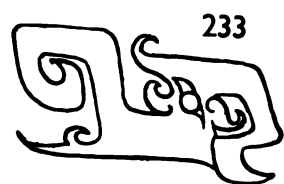


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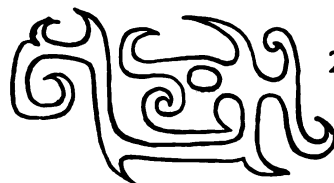
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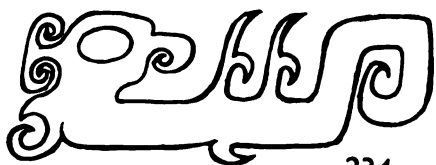
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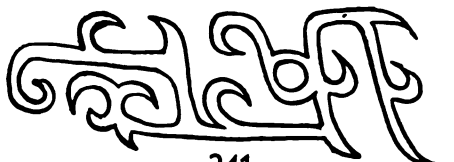
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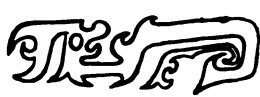
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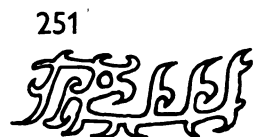
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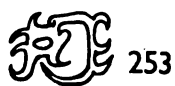
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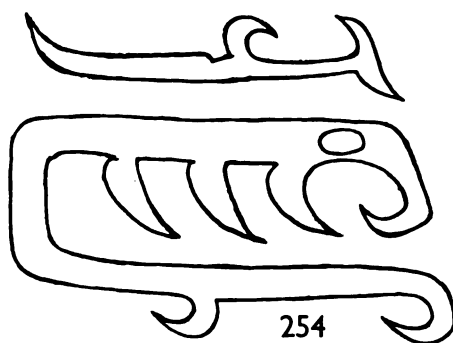
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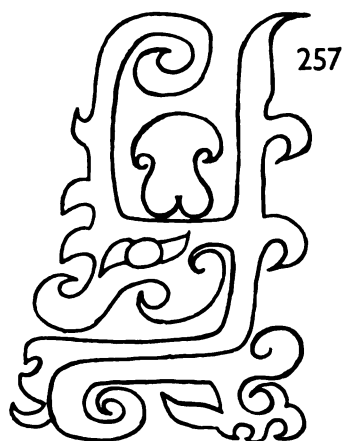
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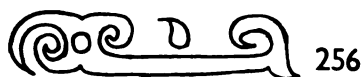
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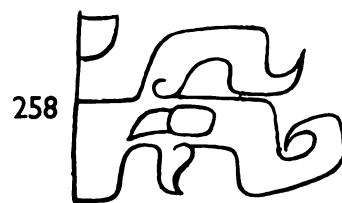
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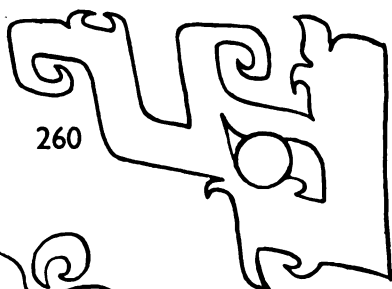
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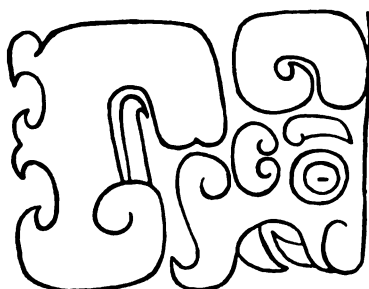
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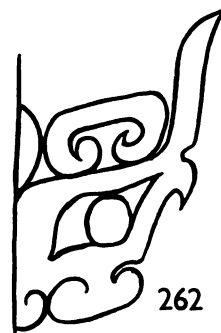
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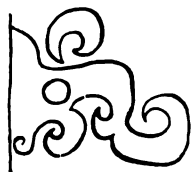
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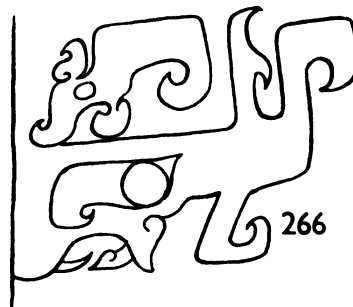
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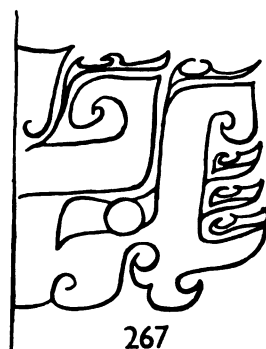
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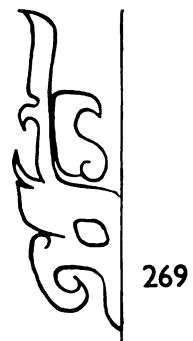
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269



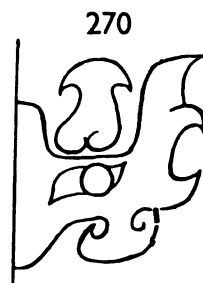
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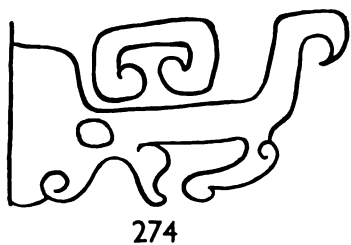
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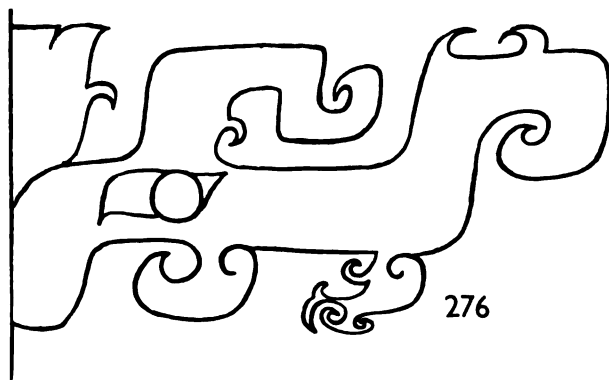
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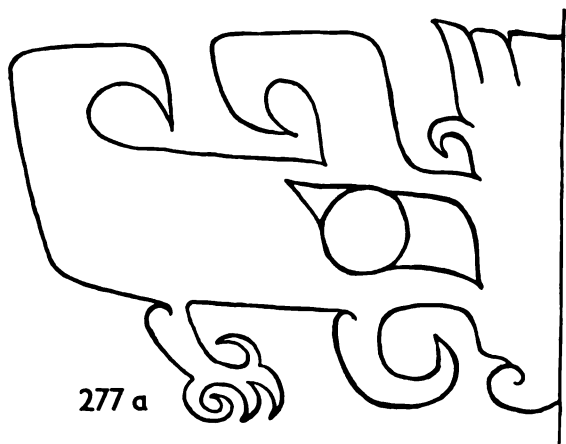
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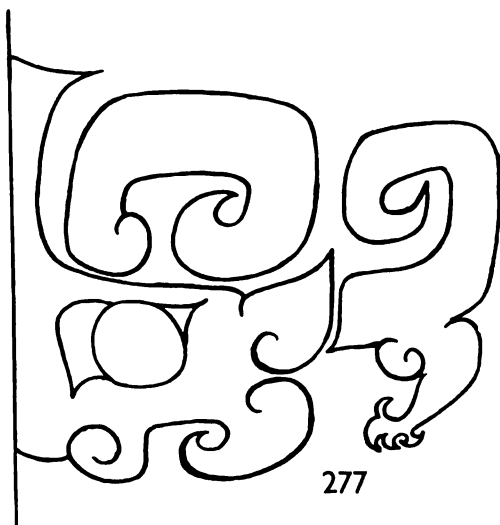
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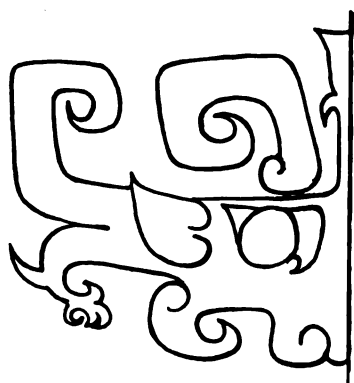
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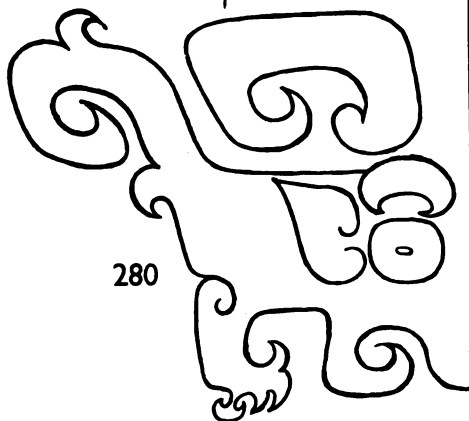
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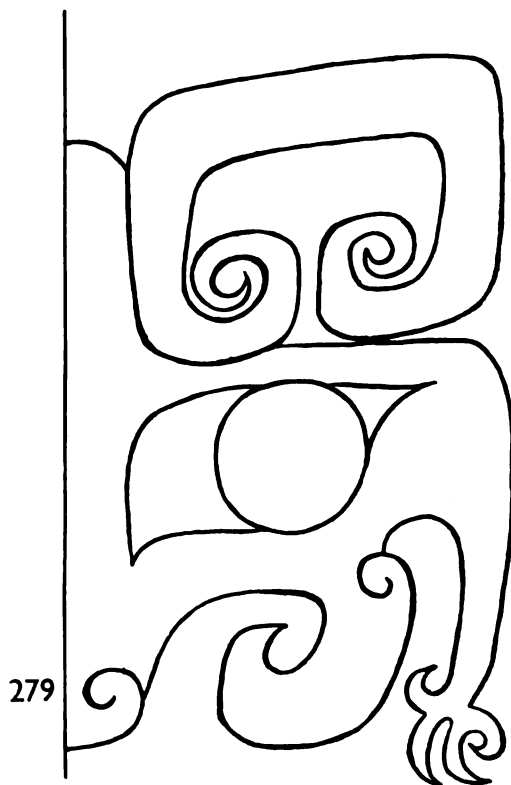
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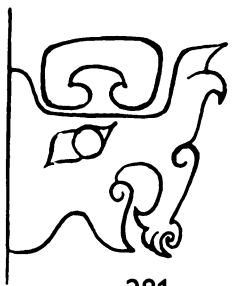
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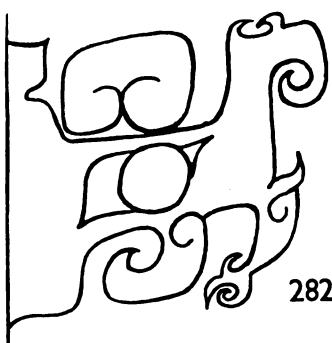
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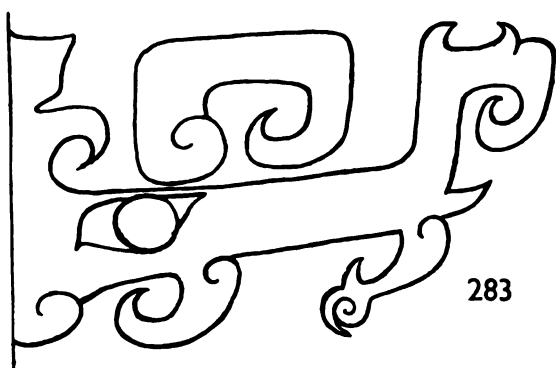
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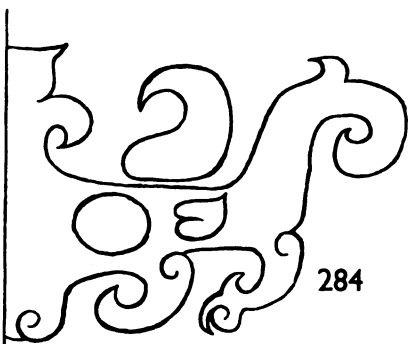
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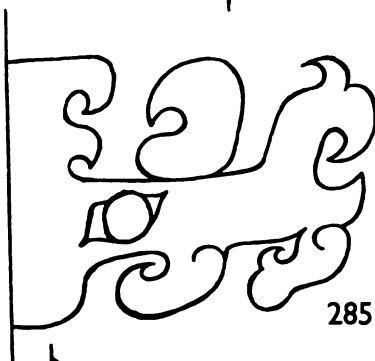
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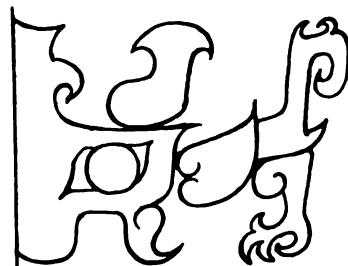
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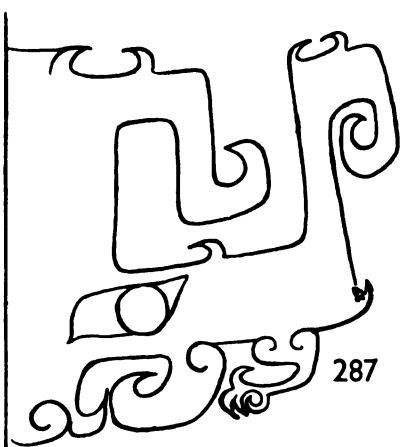
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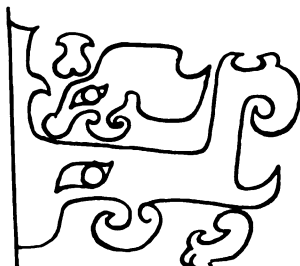
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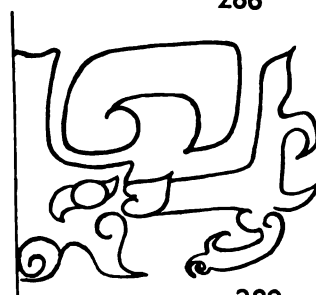
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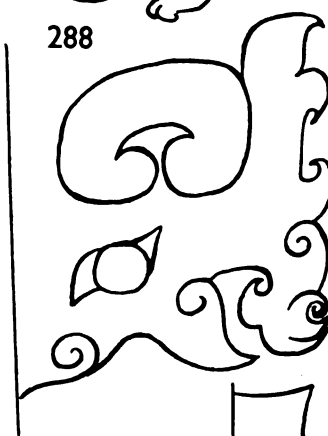
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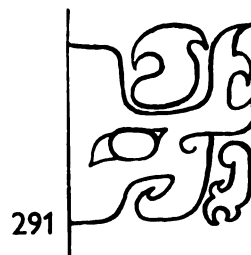
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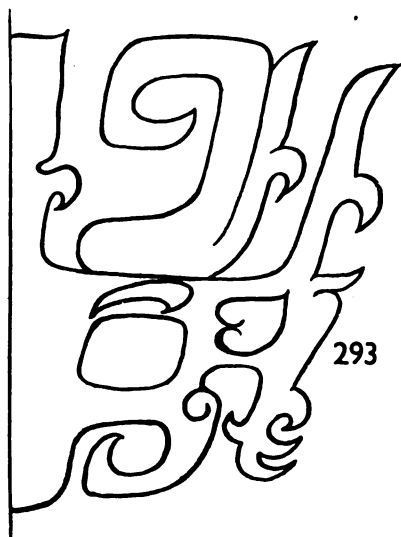
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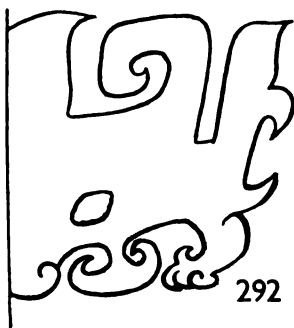
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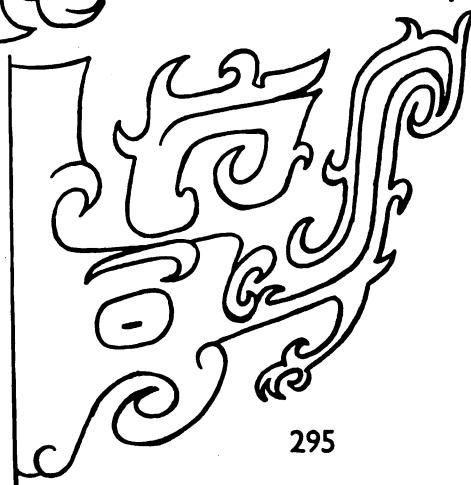
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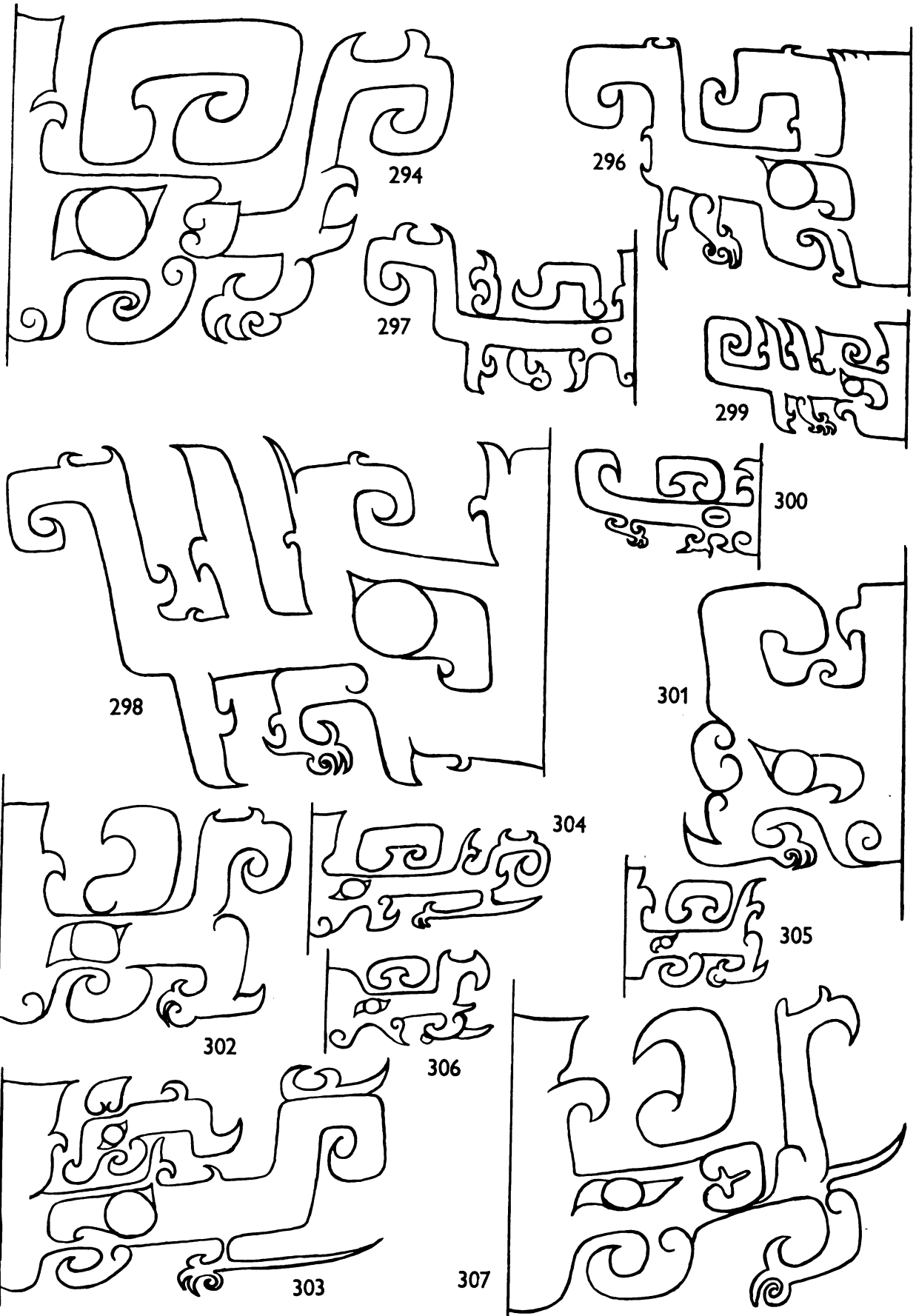
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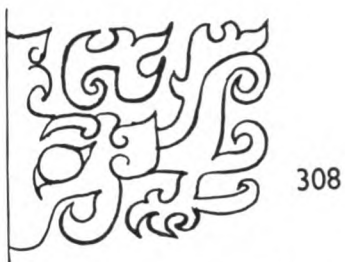


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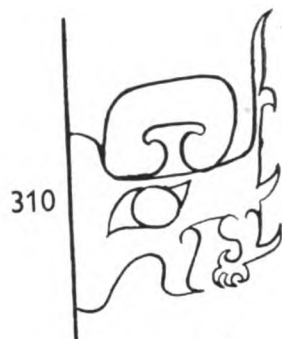




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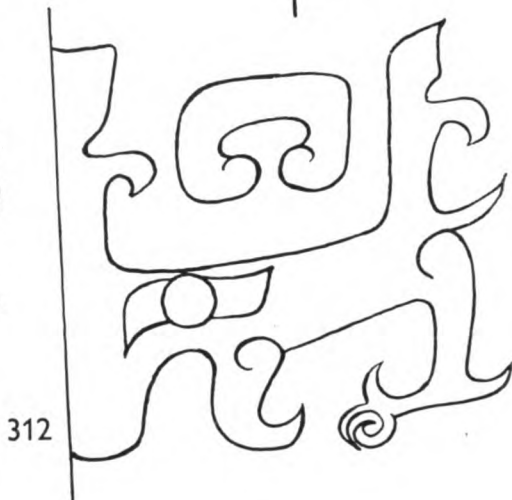
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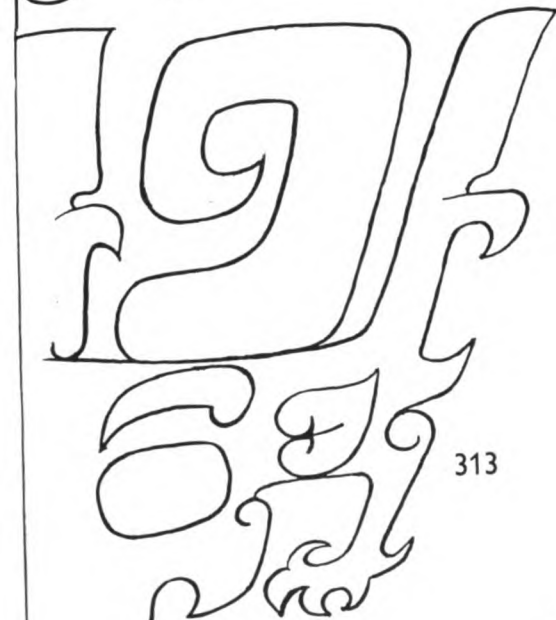
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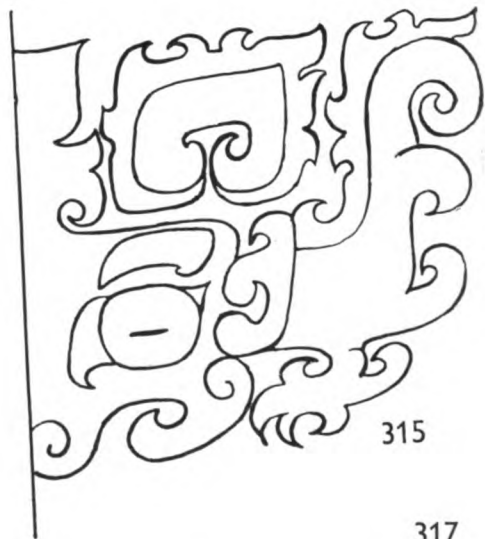
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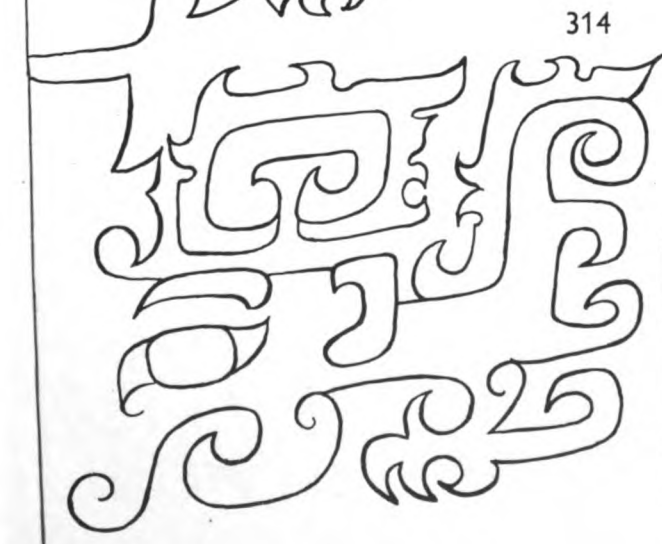
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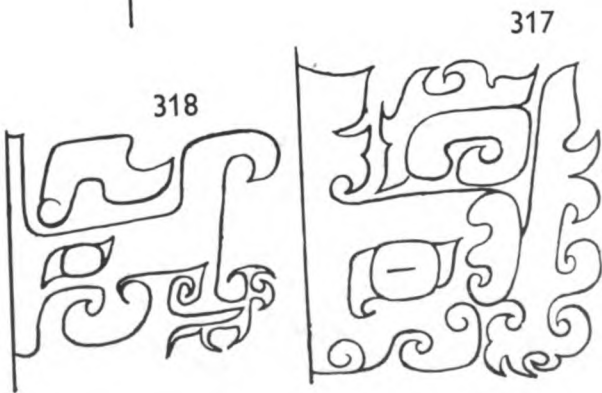
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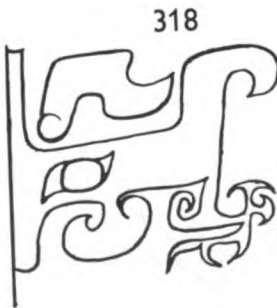
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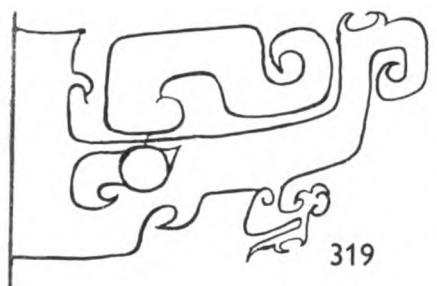
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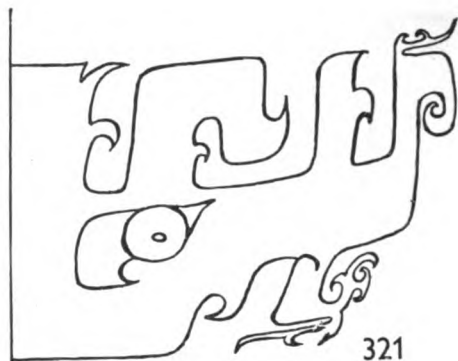
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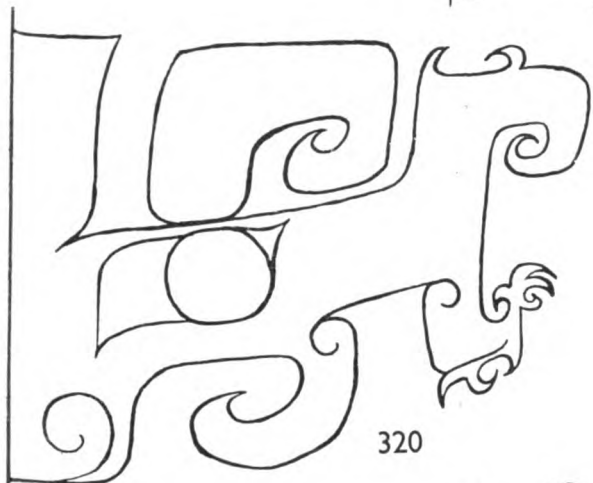
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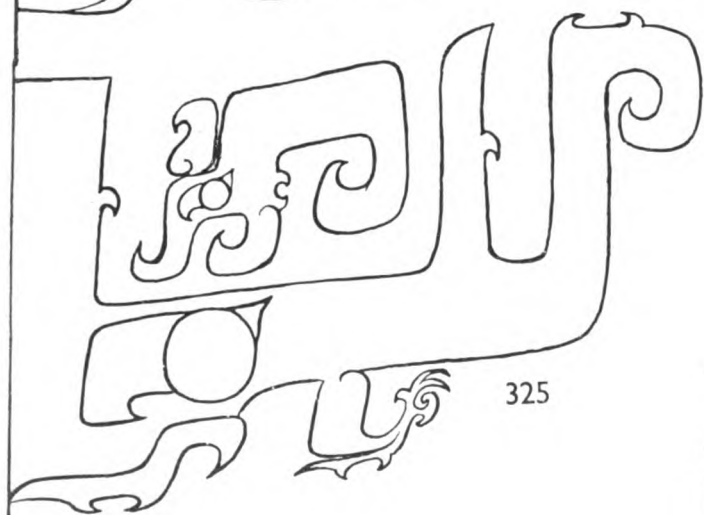
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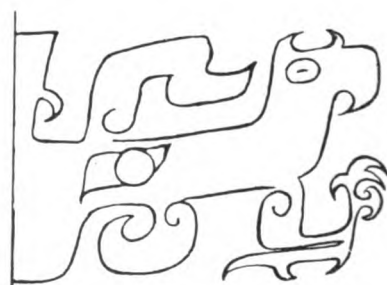
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321 a



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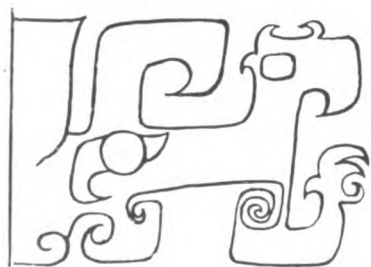


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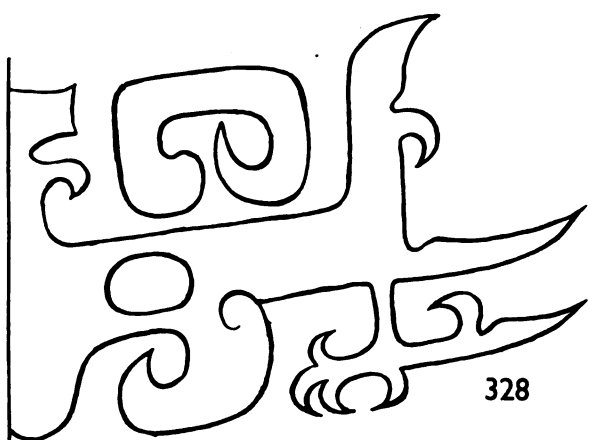
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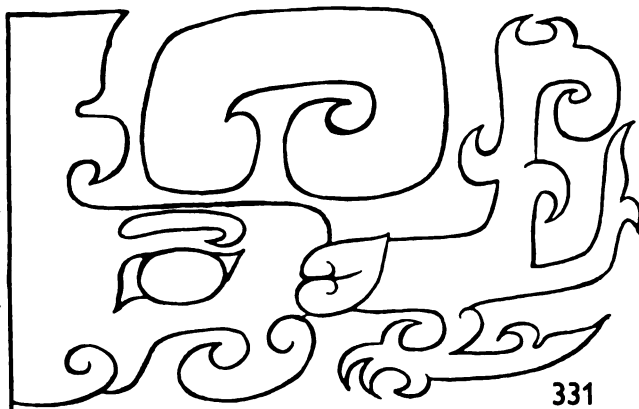
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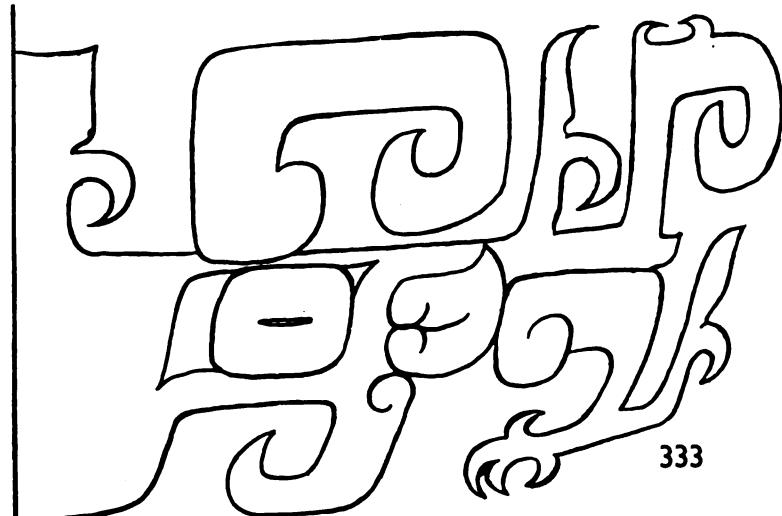
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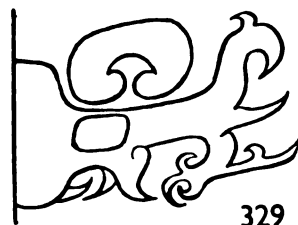
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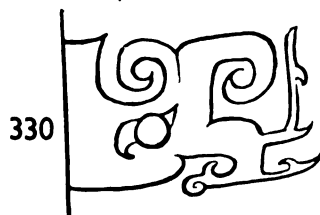
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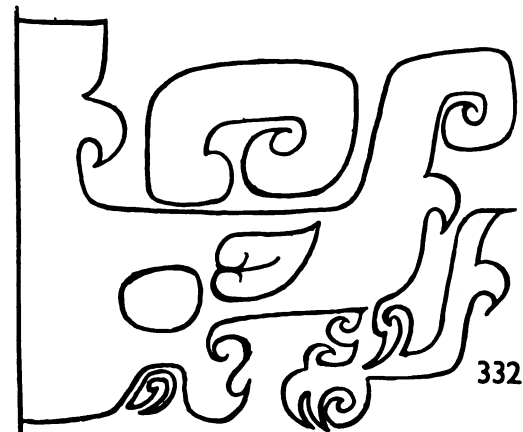
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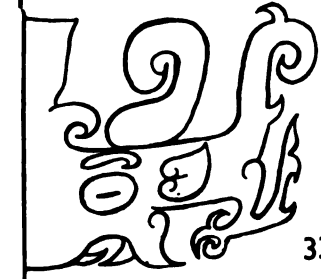
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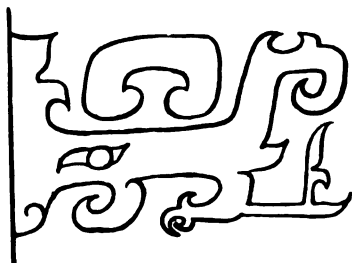
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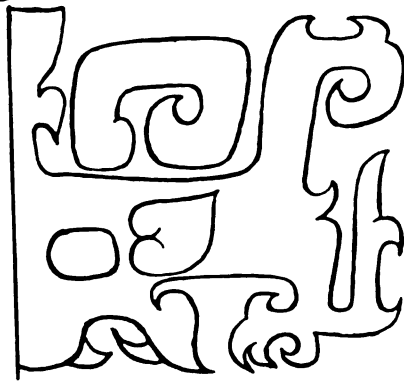


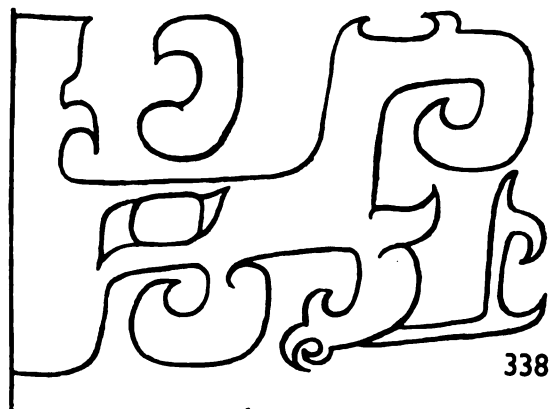
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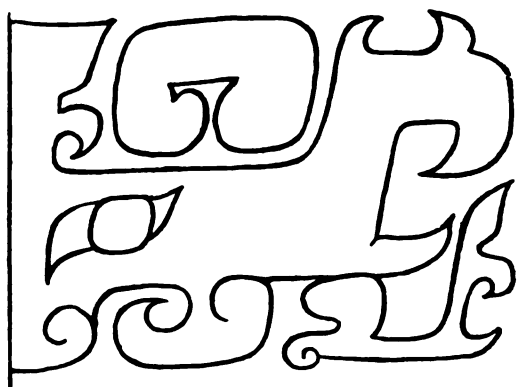
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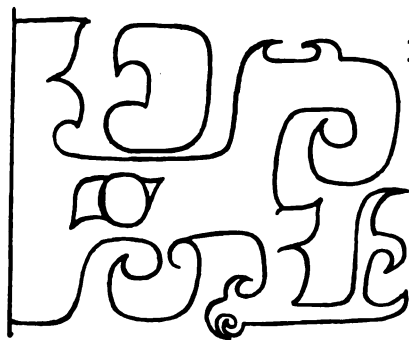




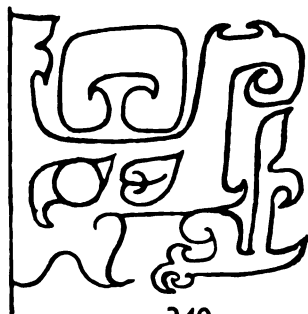
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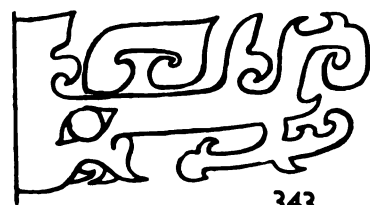
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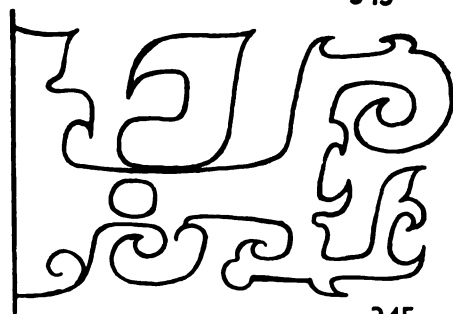
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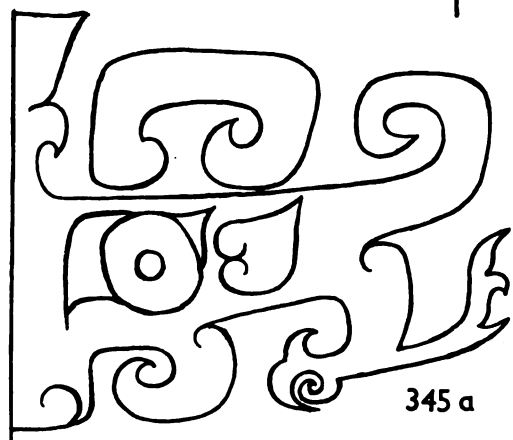
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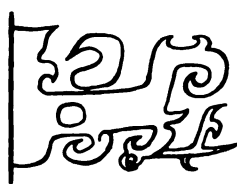
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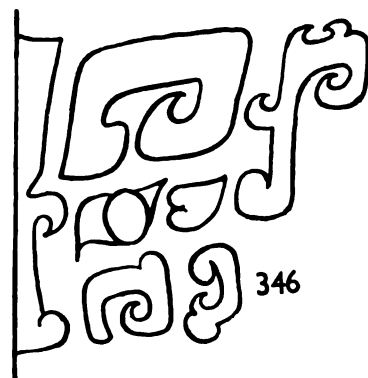
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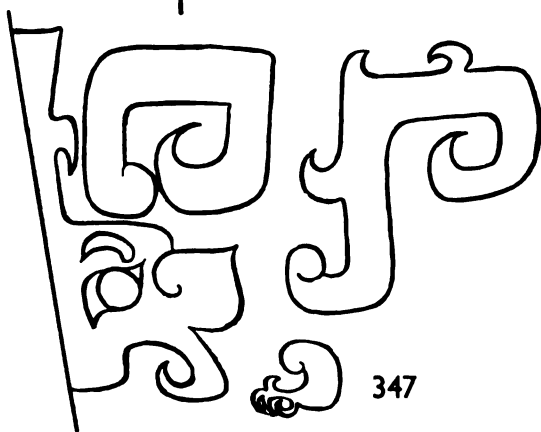
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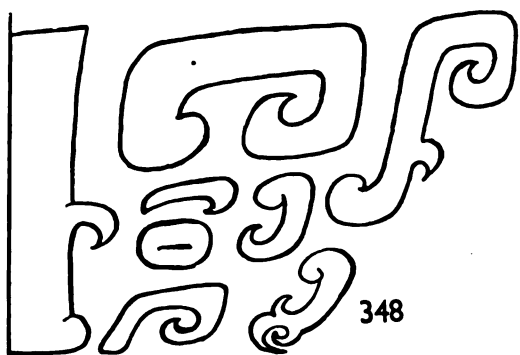
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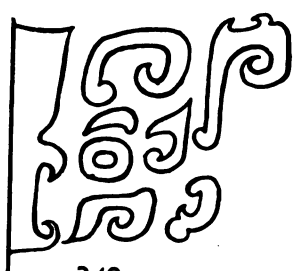
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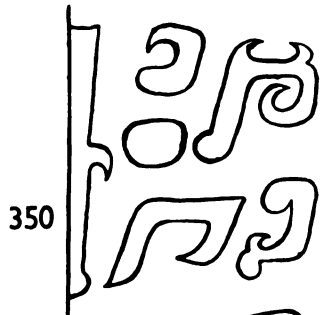
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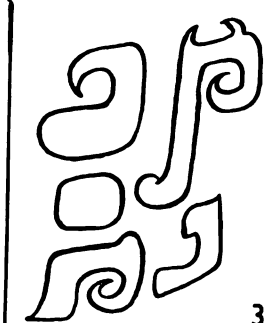
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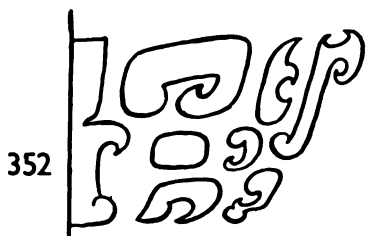
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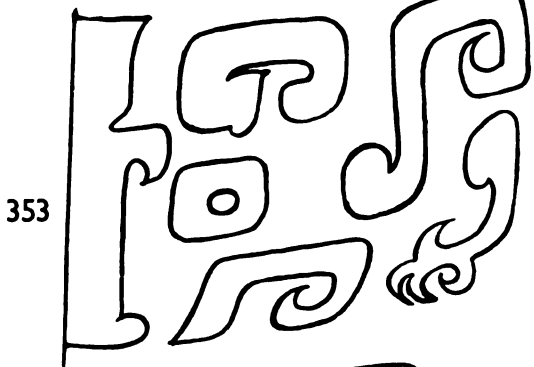
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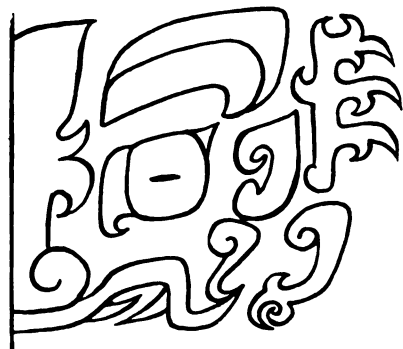
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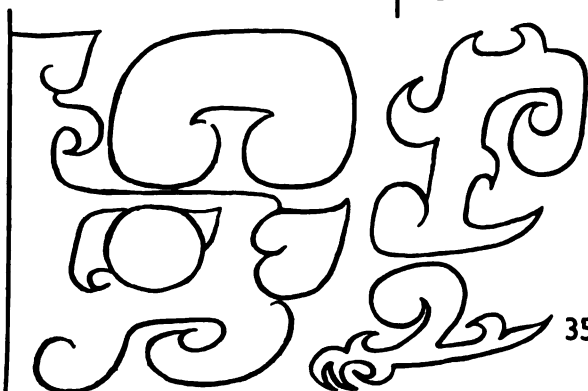
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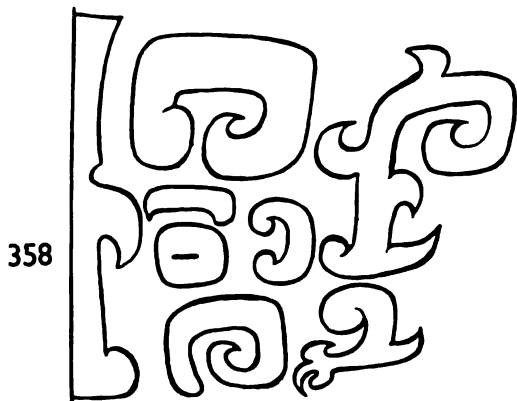
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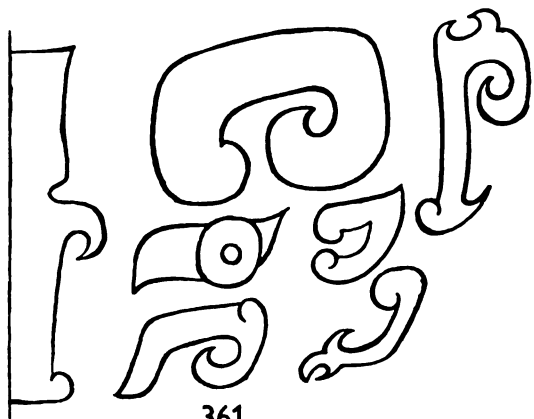
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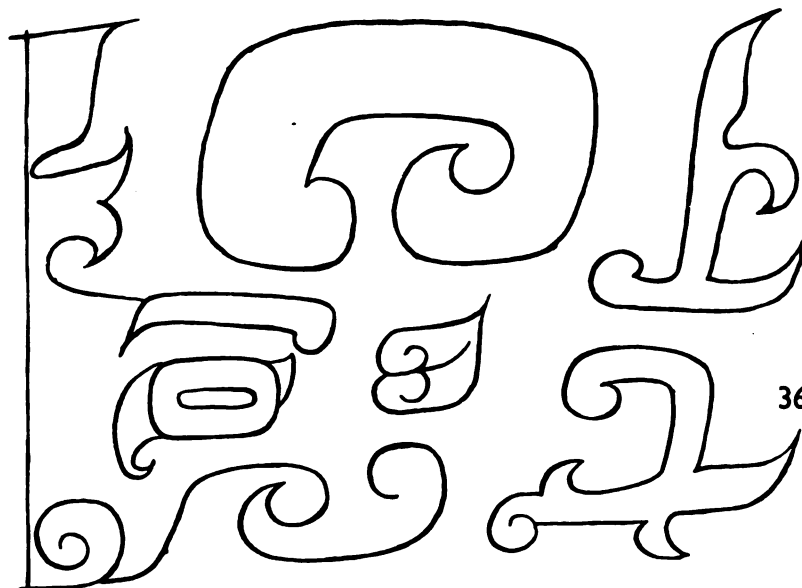
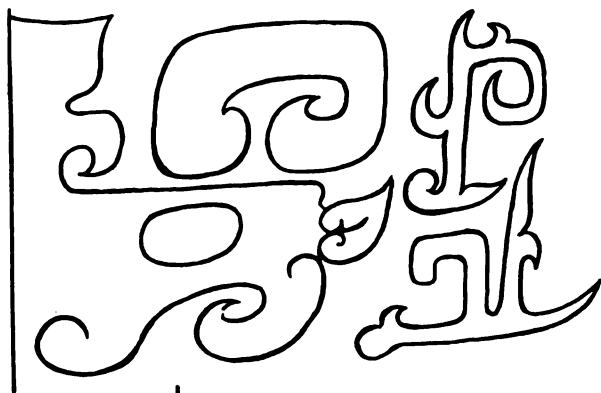


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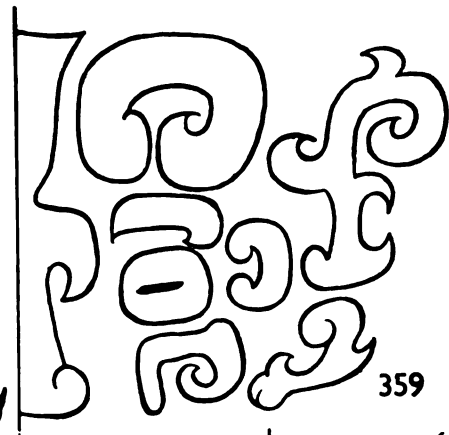


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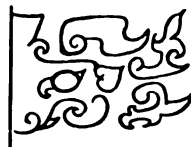
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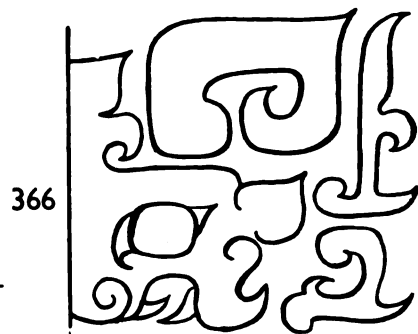
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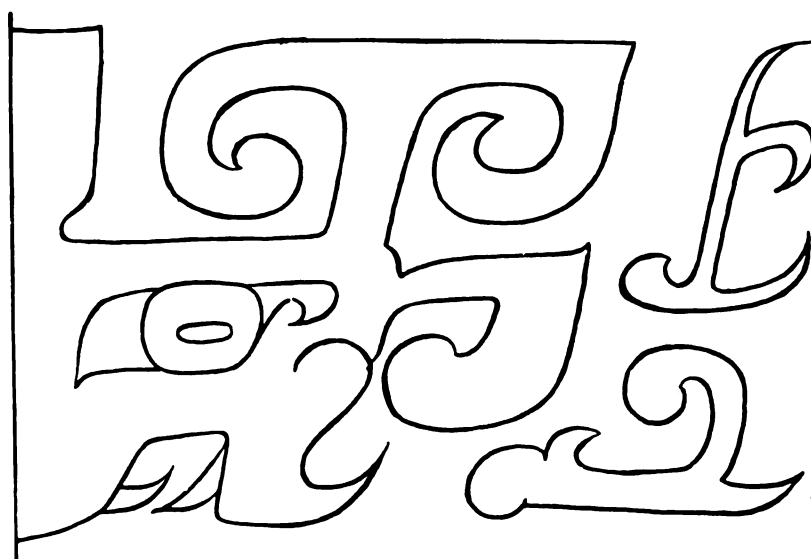
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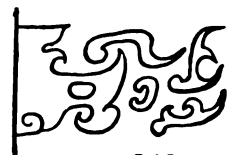
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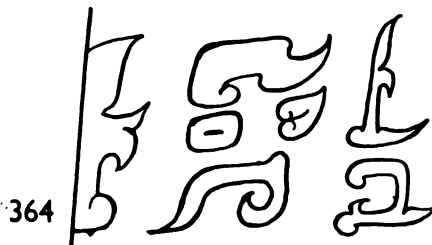
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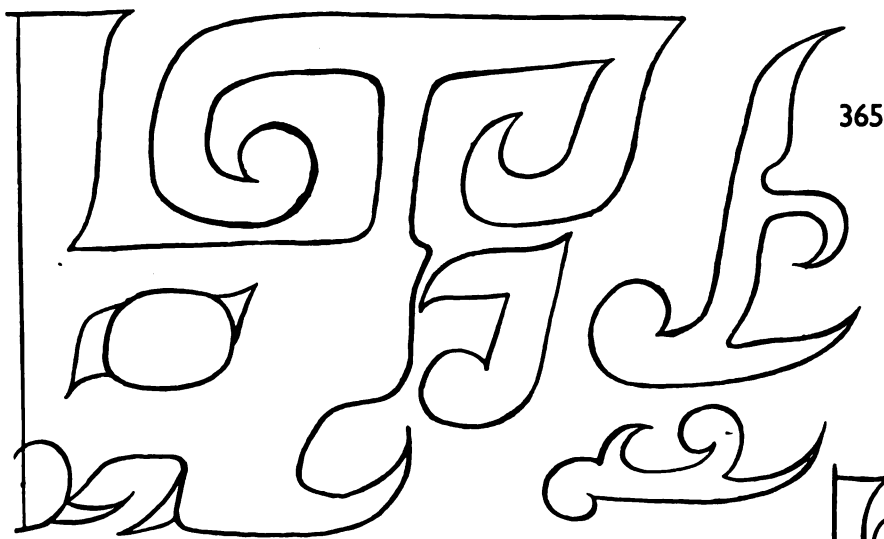
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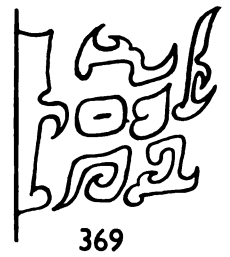
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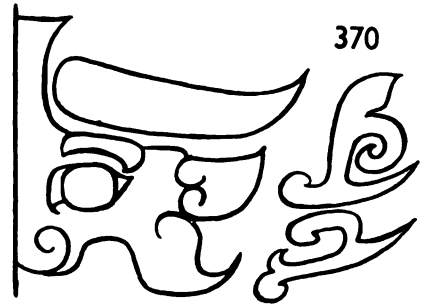
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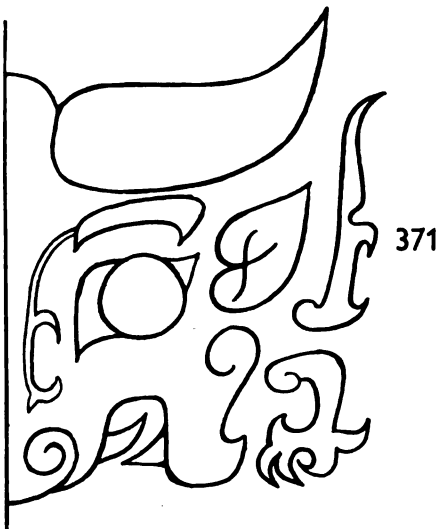
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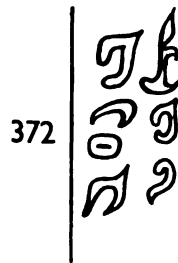
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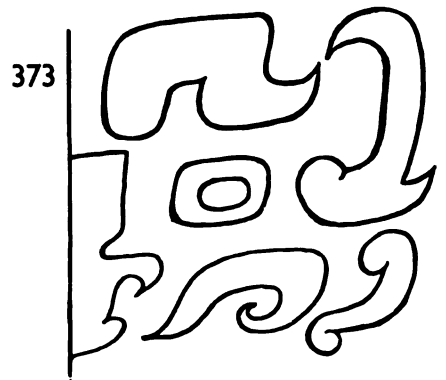
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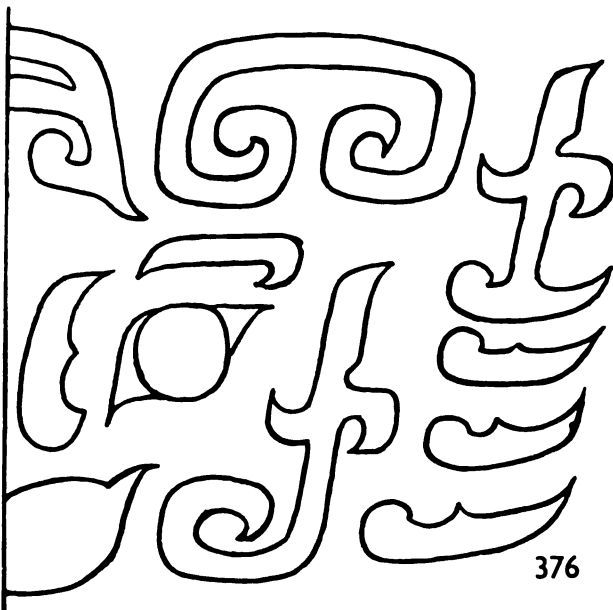
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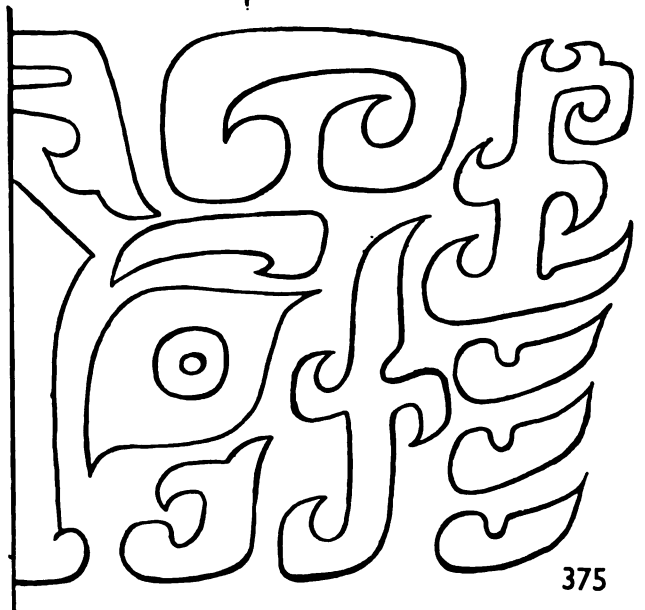
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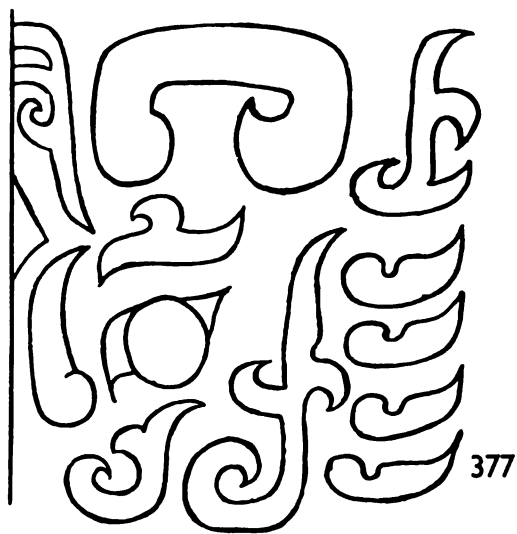
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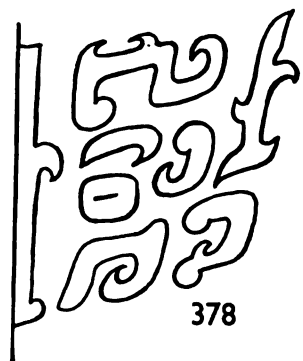
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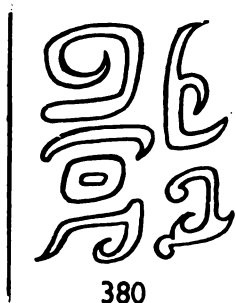
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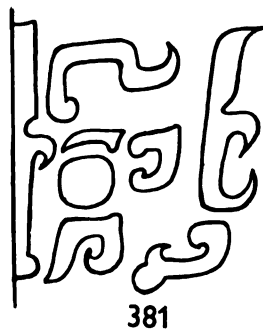
379



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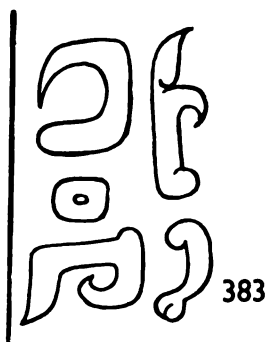
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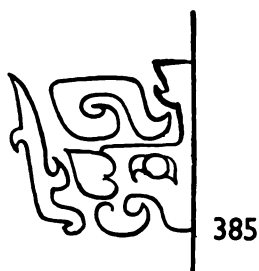
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382



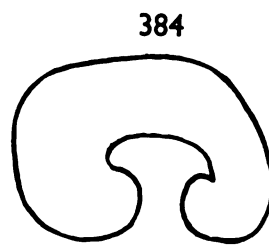
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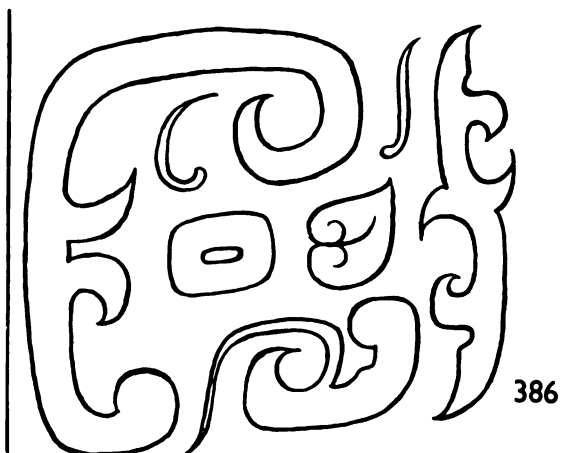
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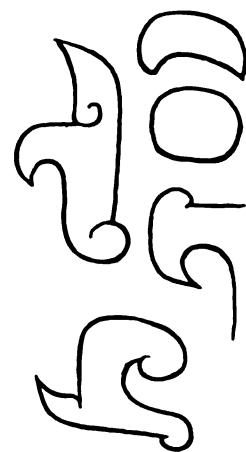
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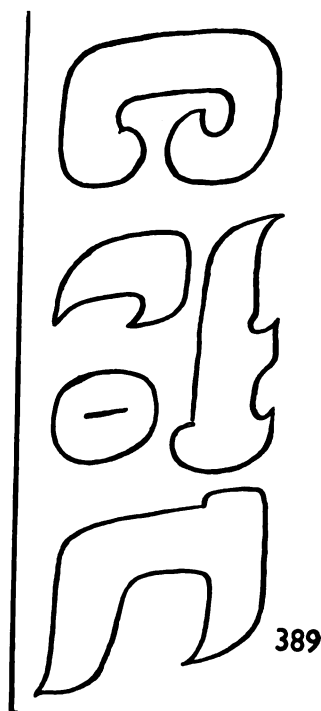


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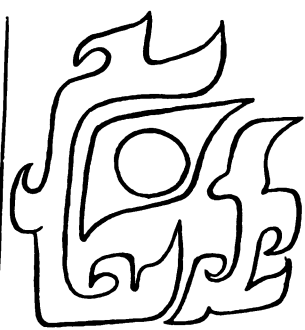


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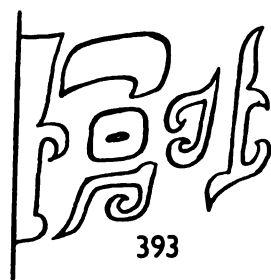




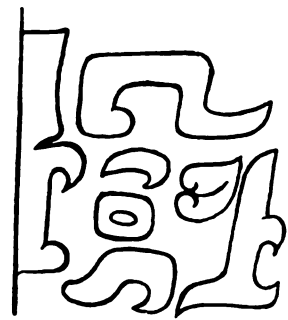
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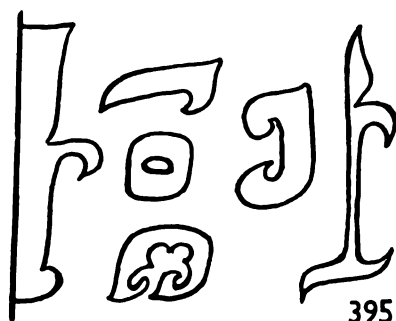
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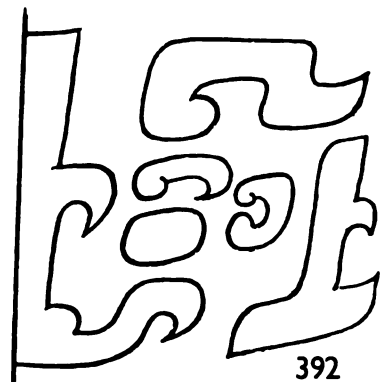
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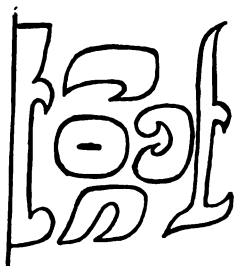
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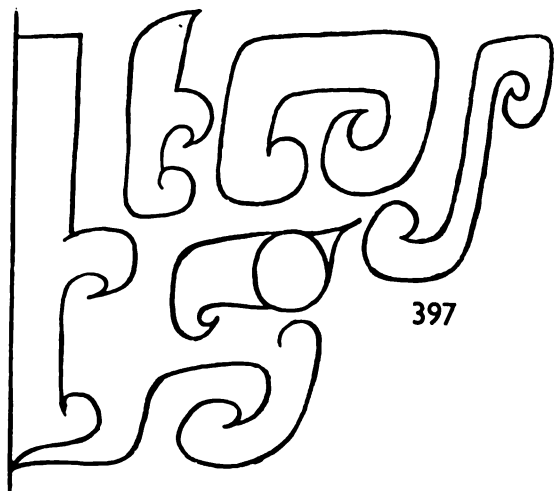
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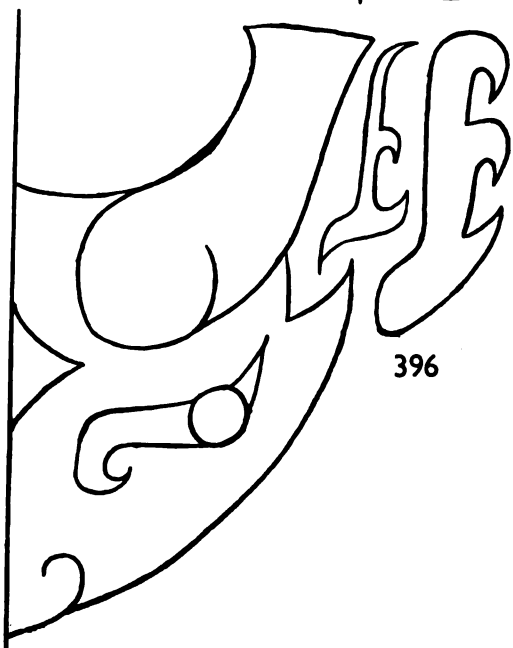
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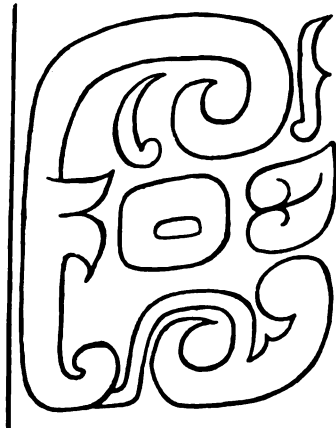
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397



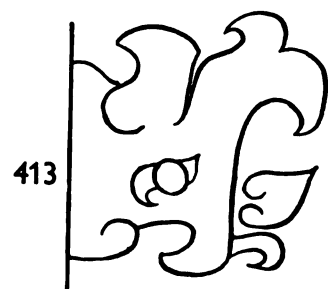
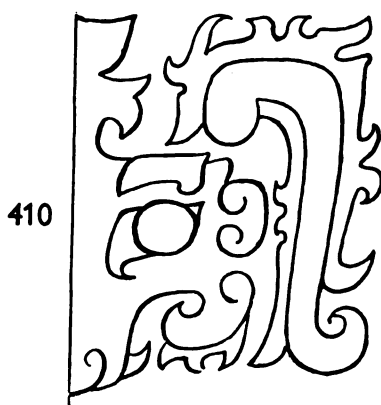
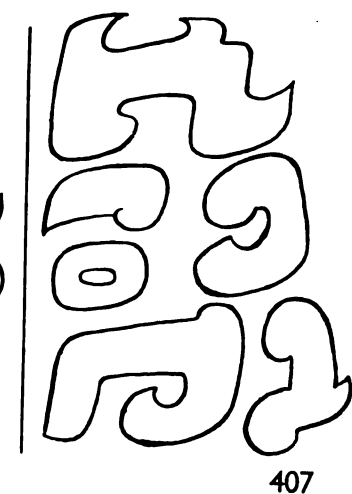
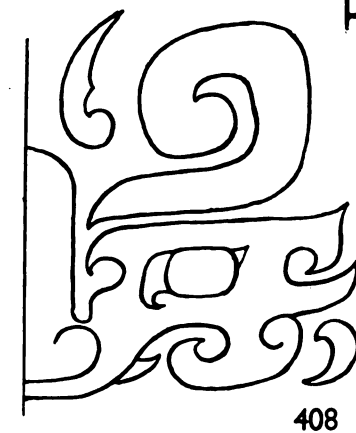
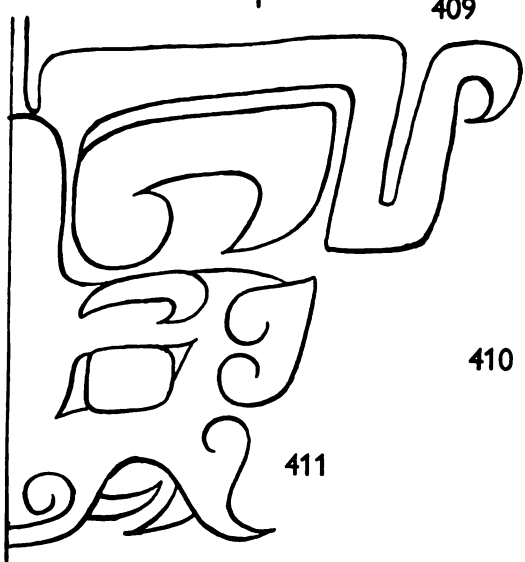
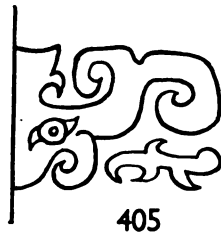
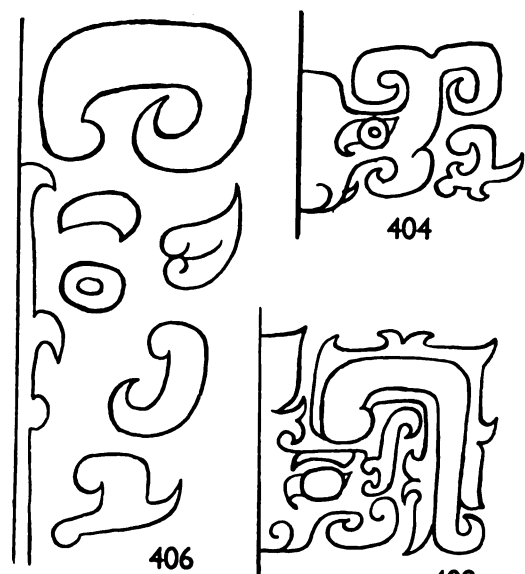
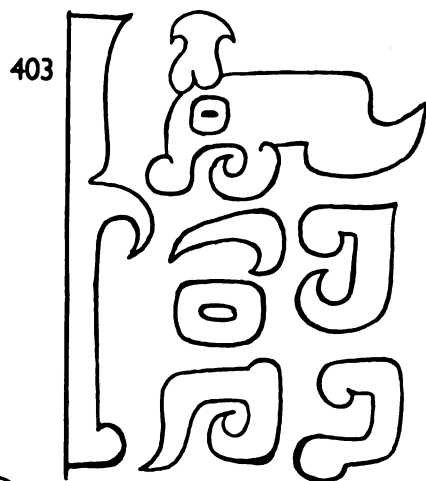
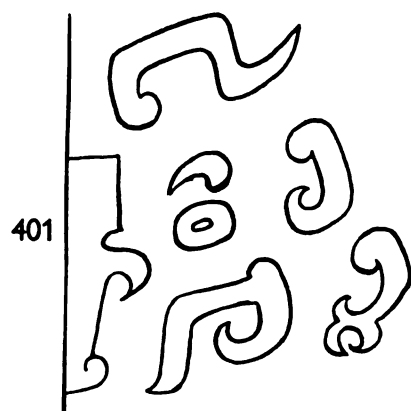
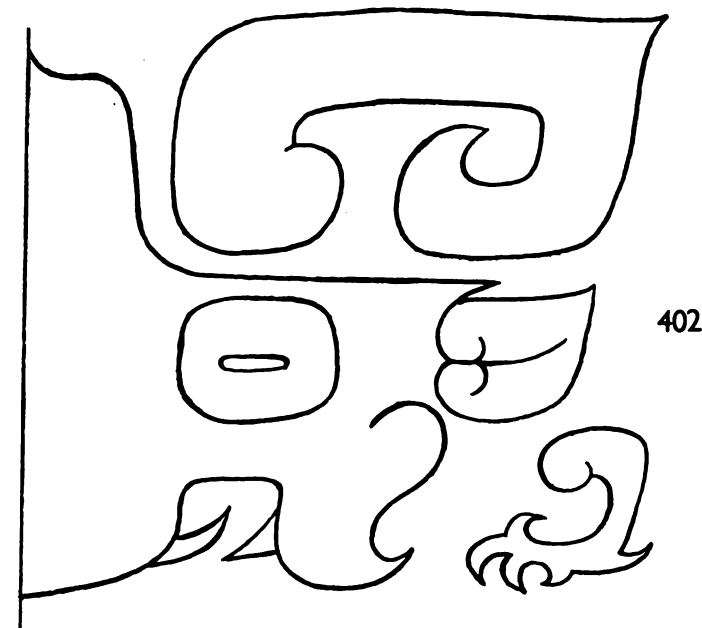
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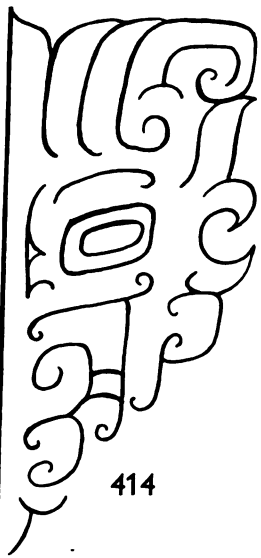


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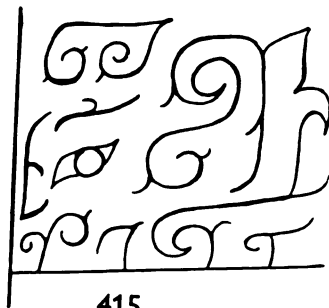




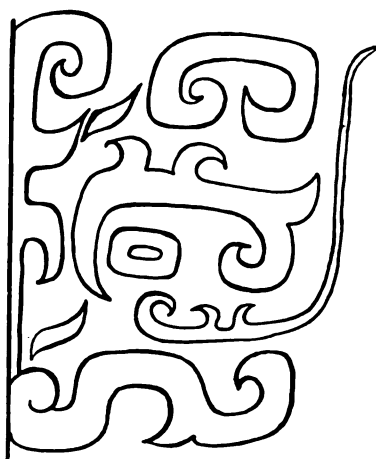
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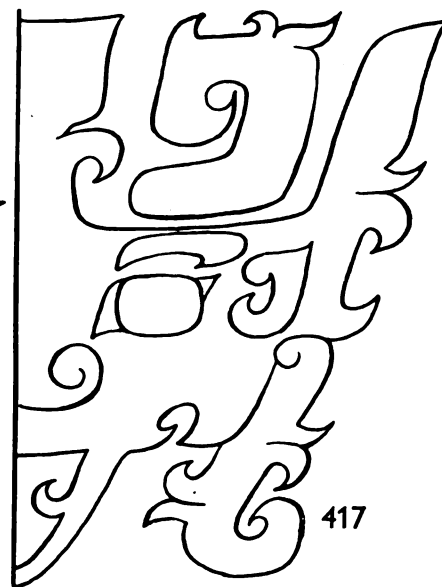
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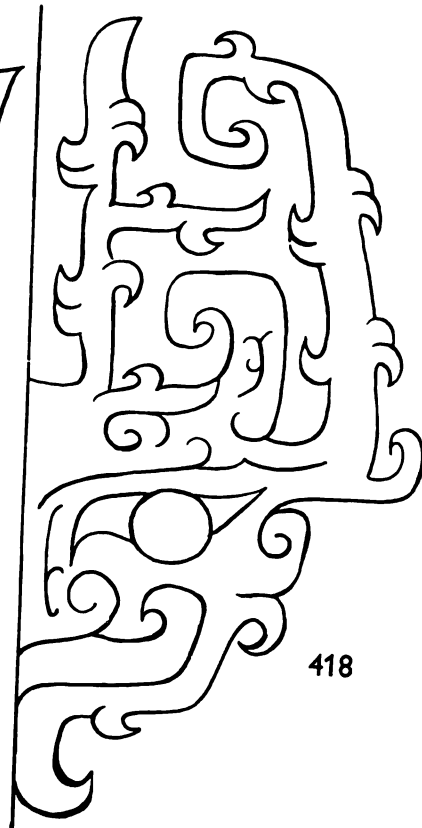
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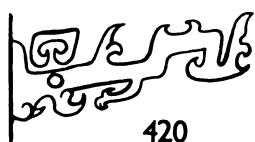
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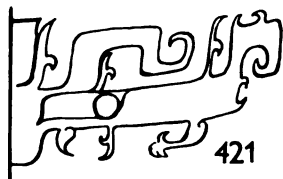
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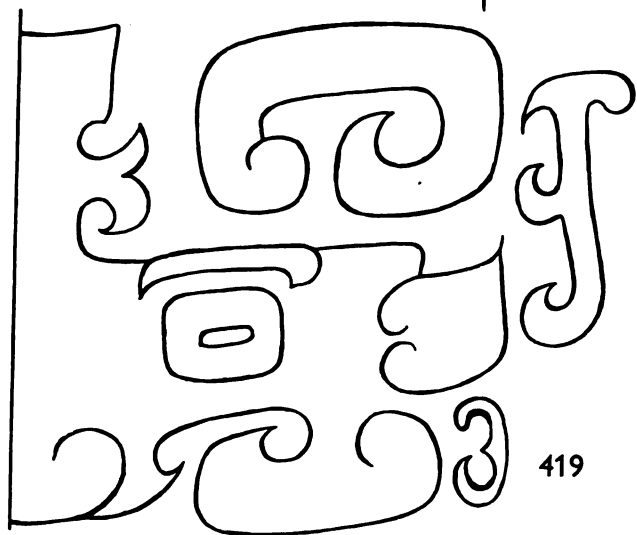
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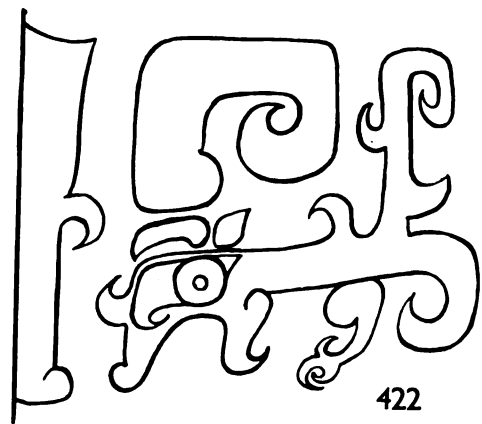
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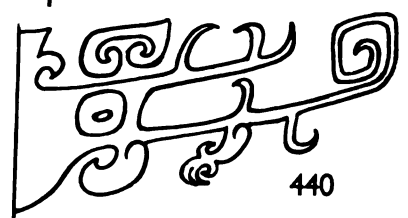
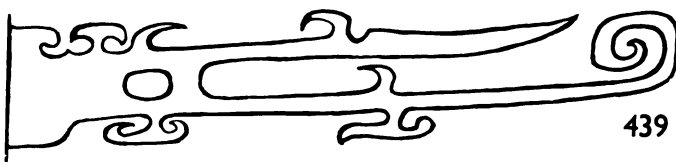
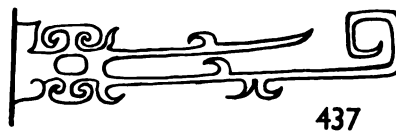
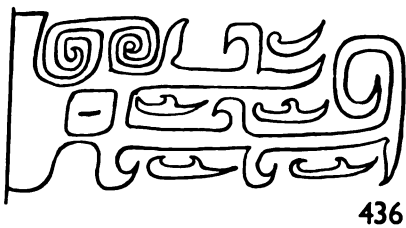
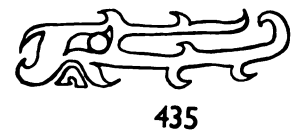
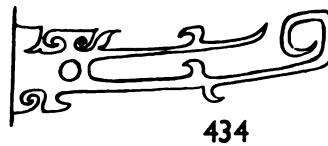
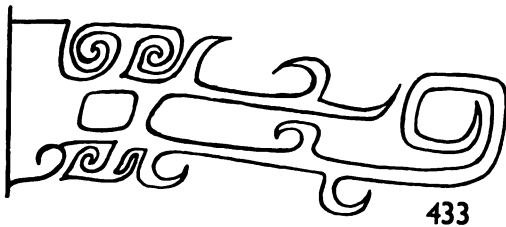
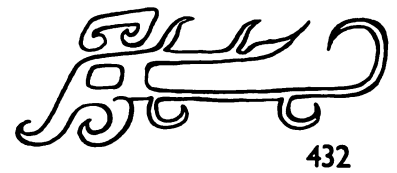
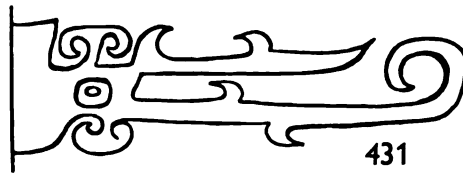
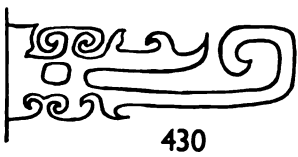
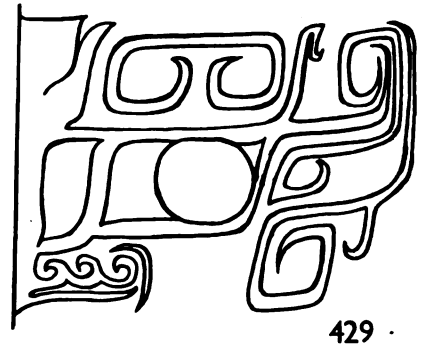
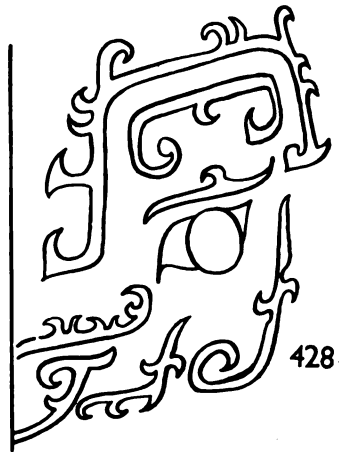
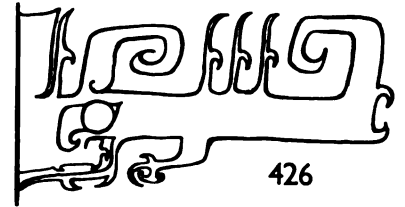
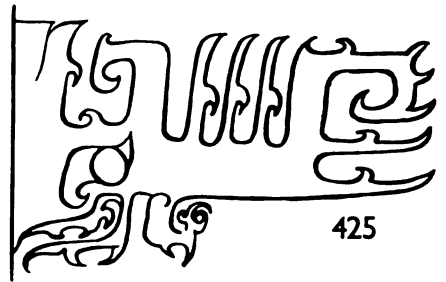
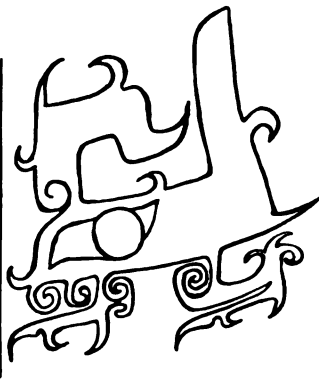
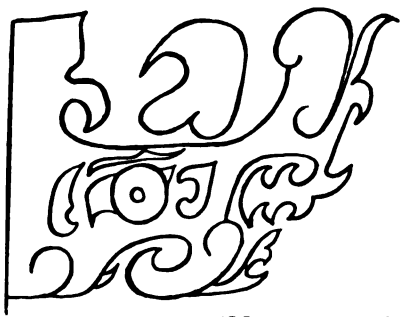
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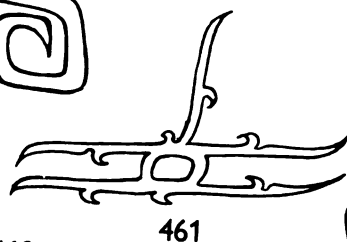
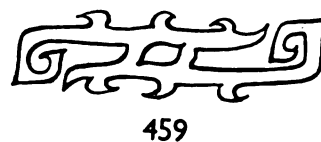
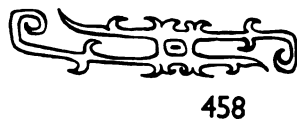
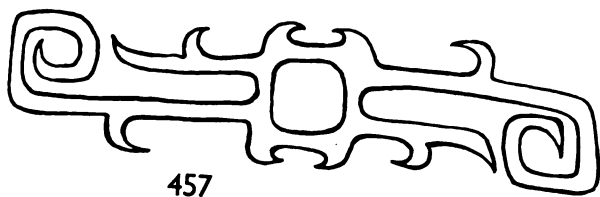
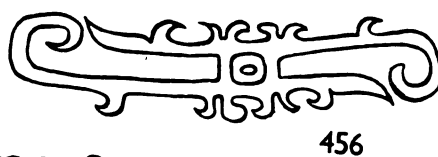
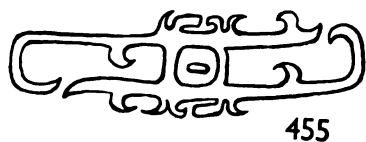
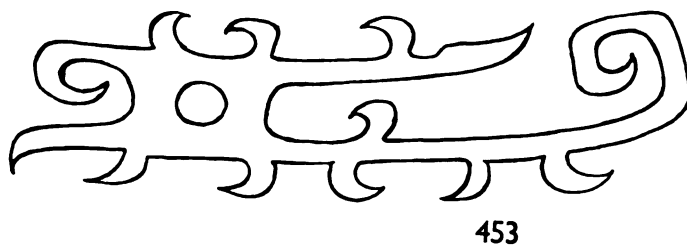
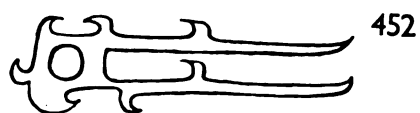
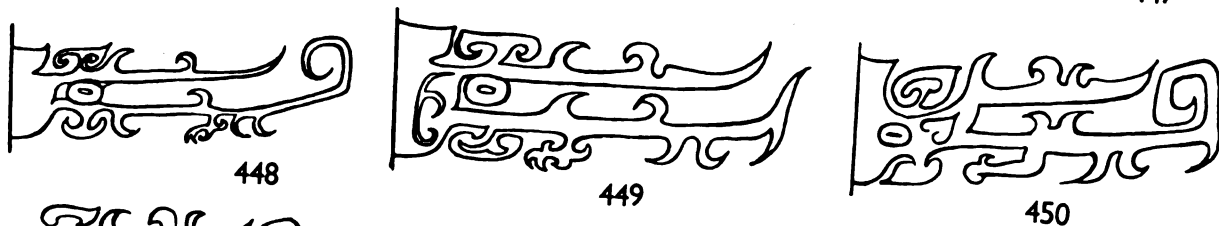
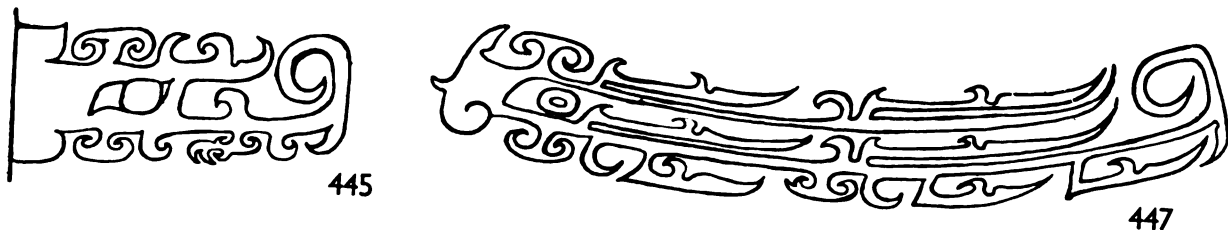
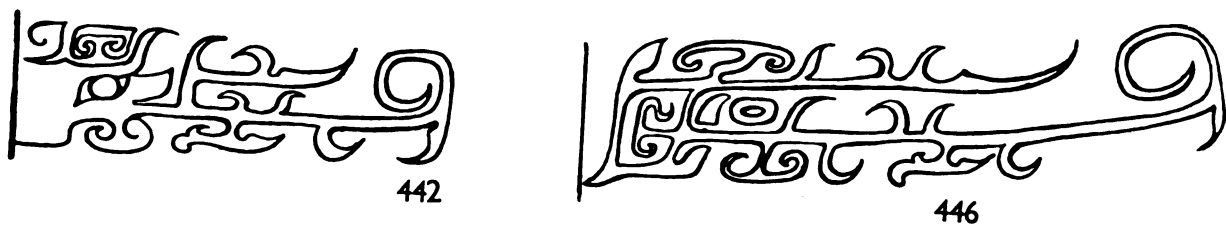


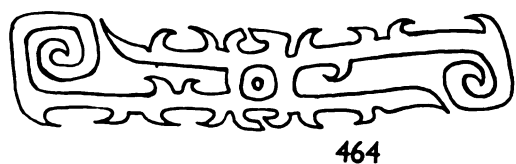
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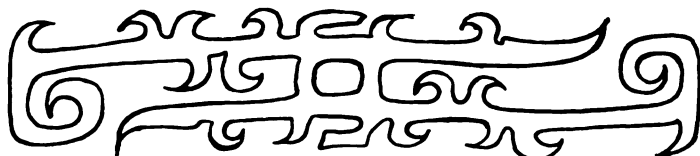
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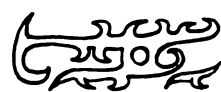
465



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470 Bone



471 Bone



473 Bone



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472 Bone



474 Bone



476 Bone



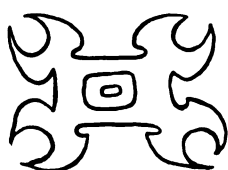
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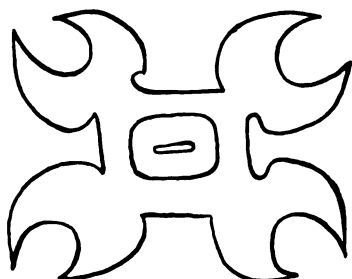
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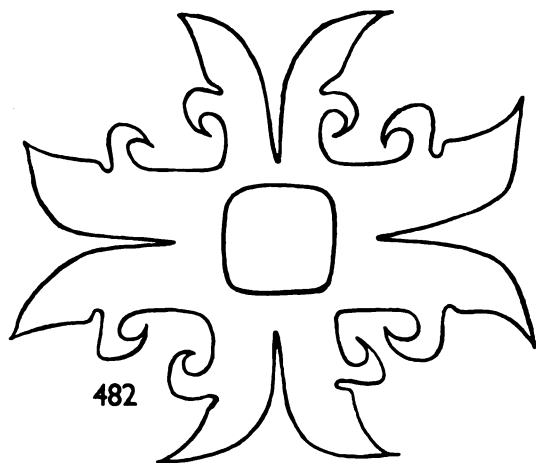
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480



481



482



b



a

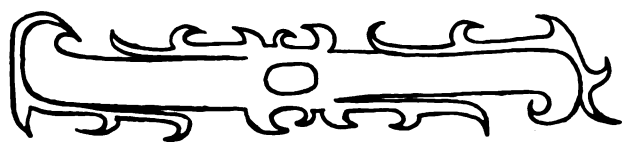
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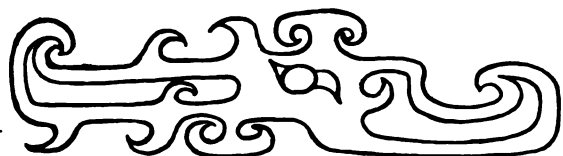
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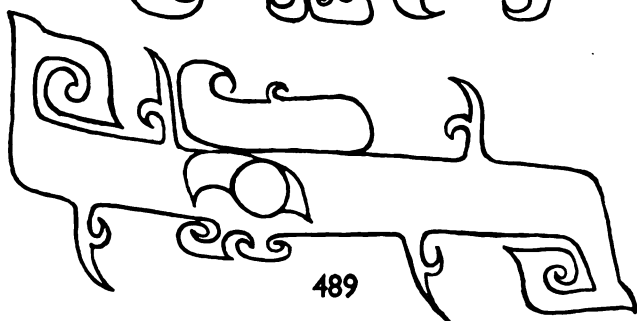
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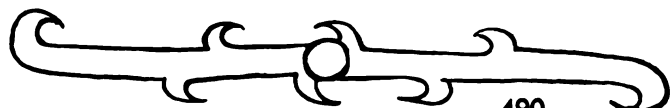
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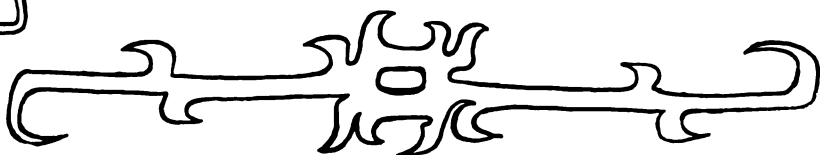
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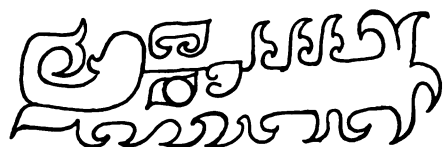
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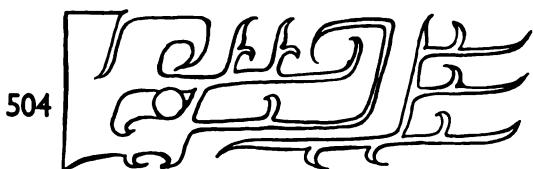
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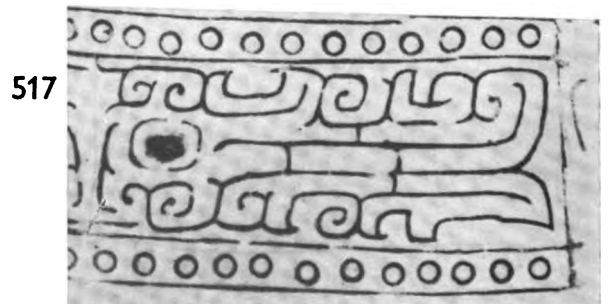
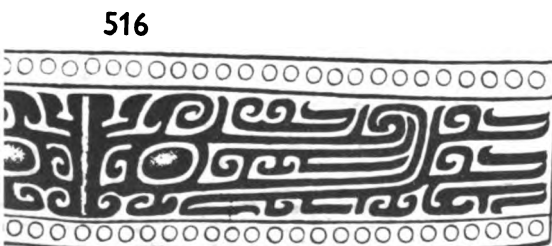
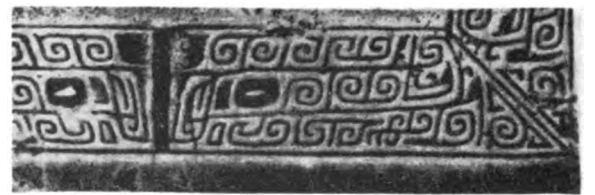
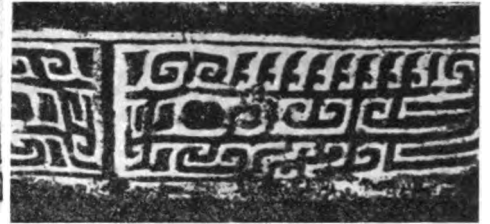
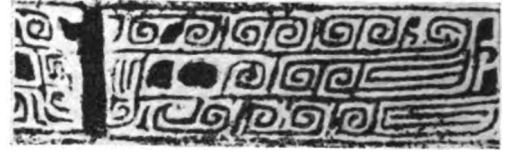
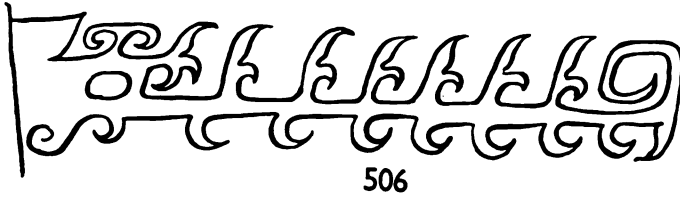
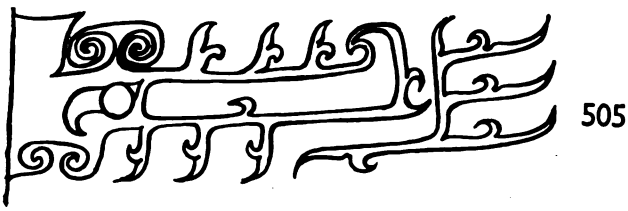
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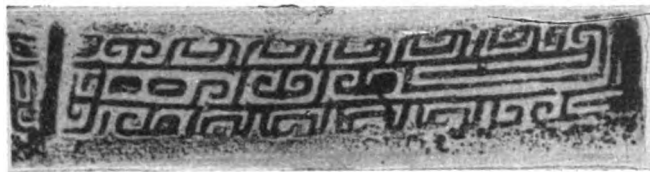




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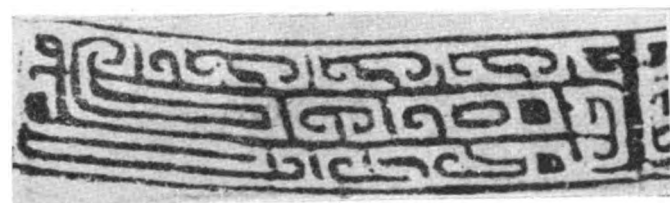
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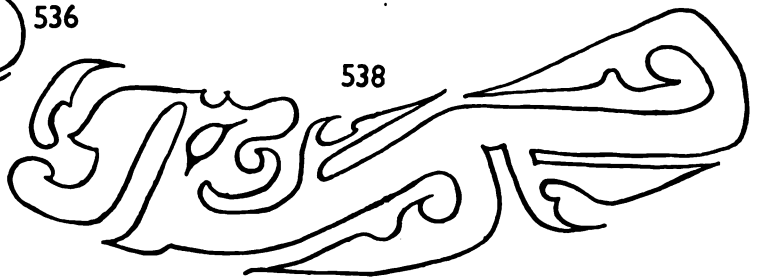
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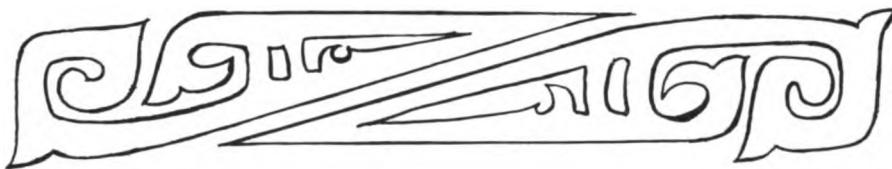
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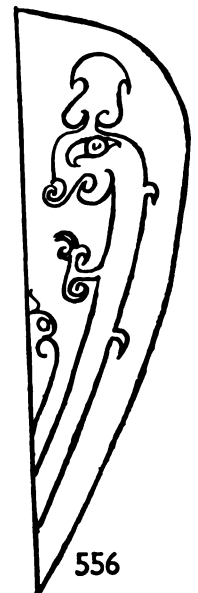
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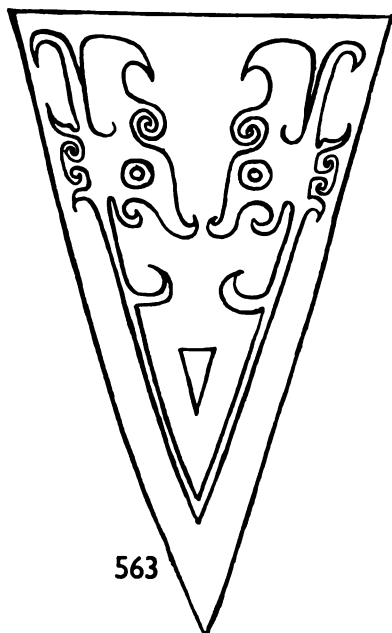
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563



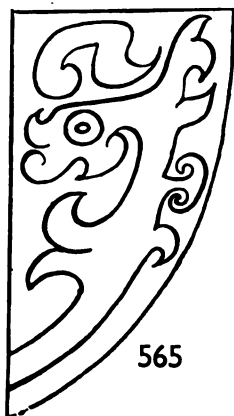
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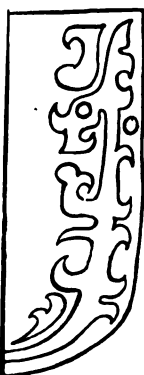
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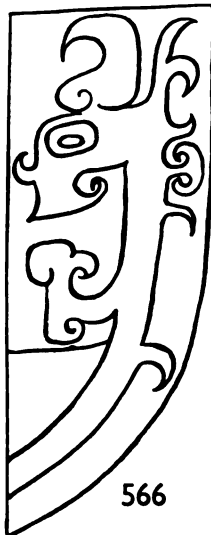
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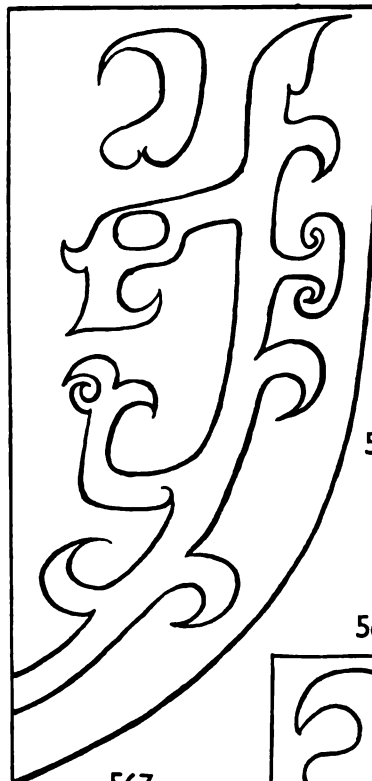
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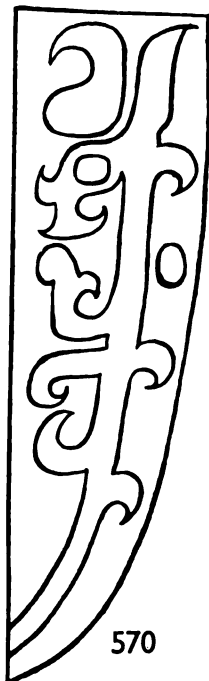
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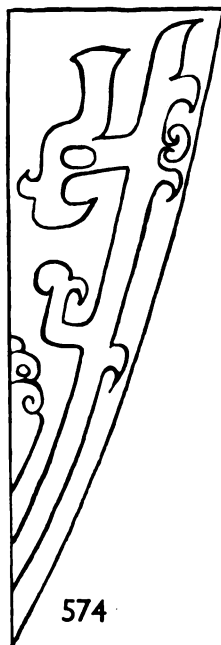
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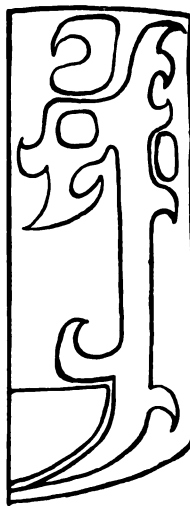
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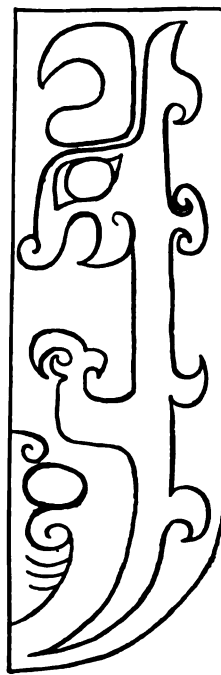
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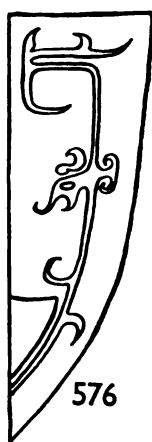
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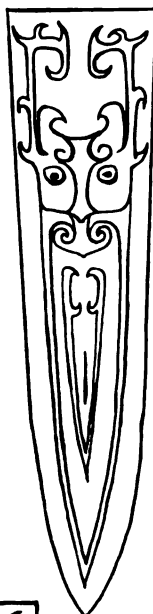
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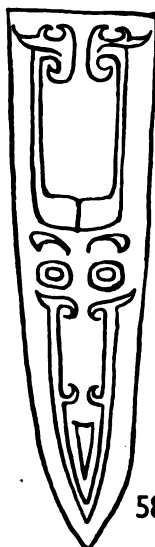
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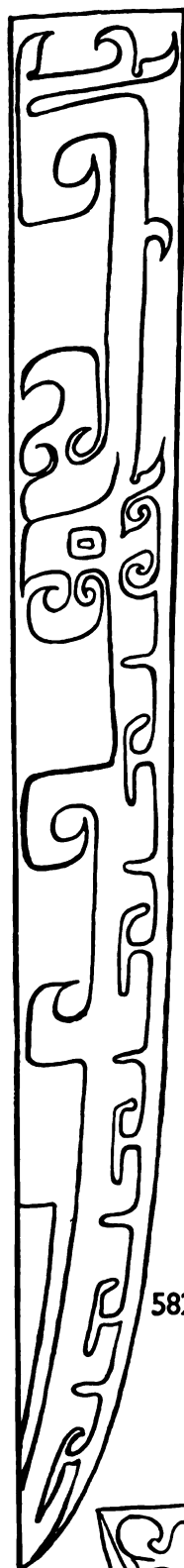
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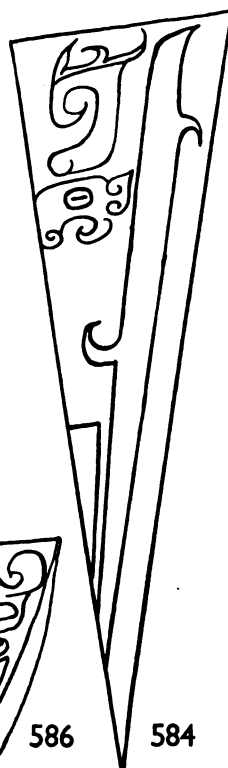
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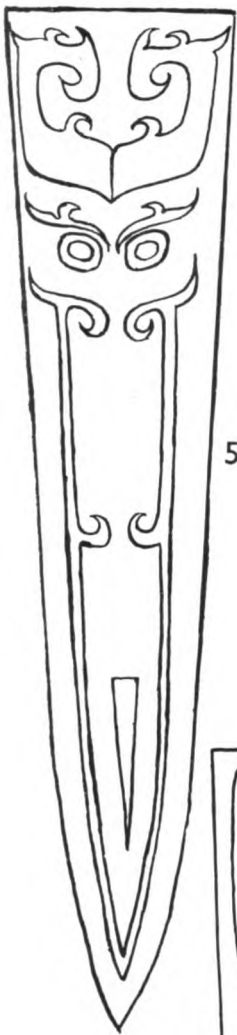
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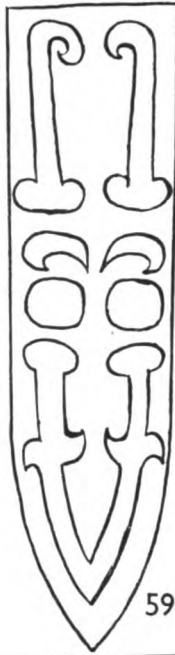
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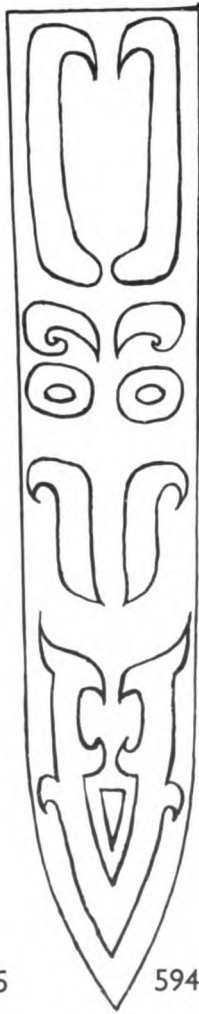
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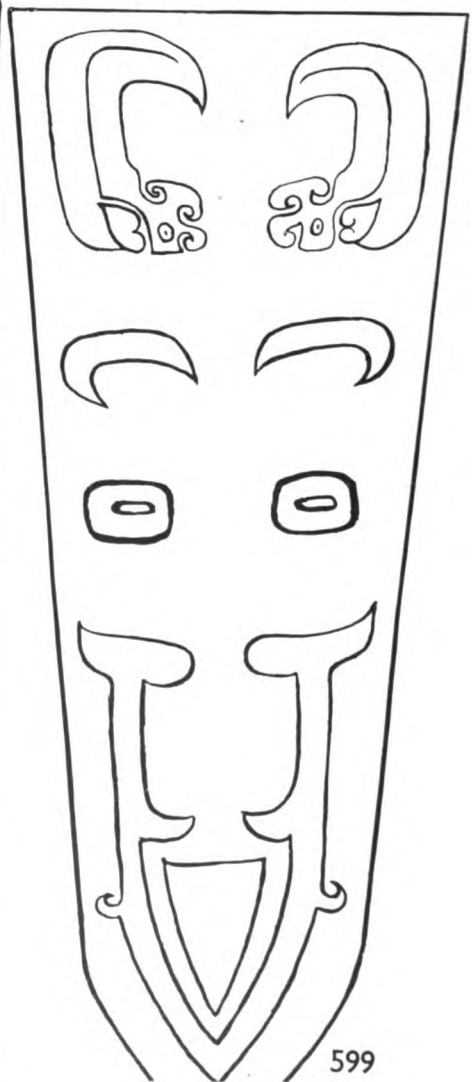
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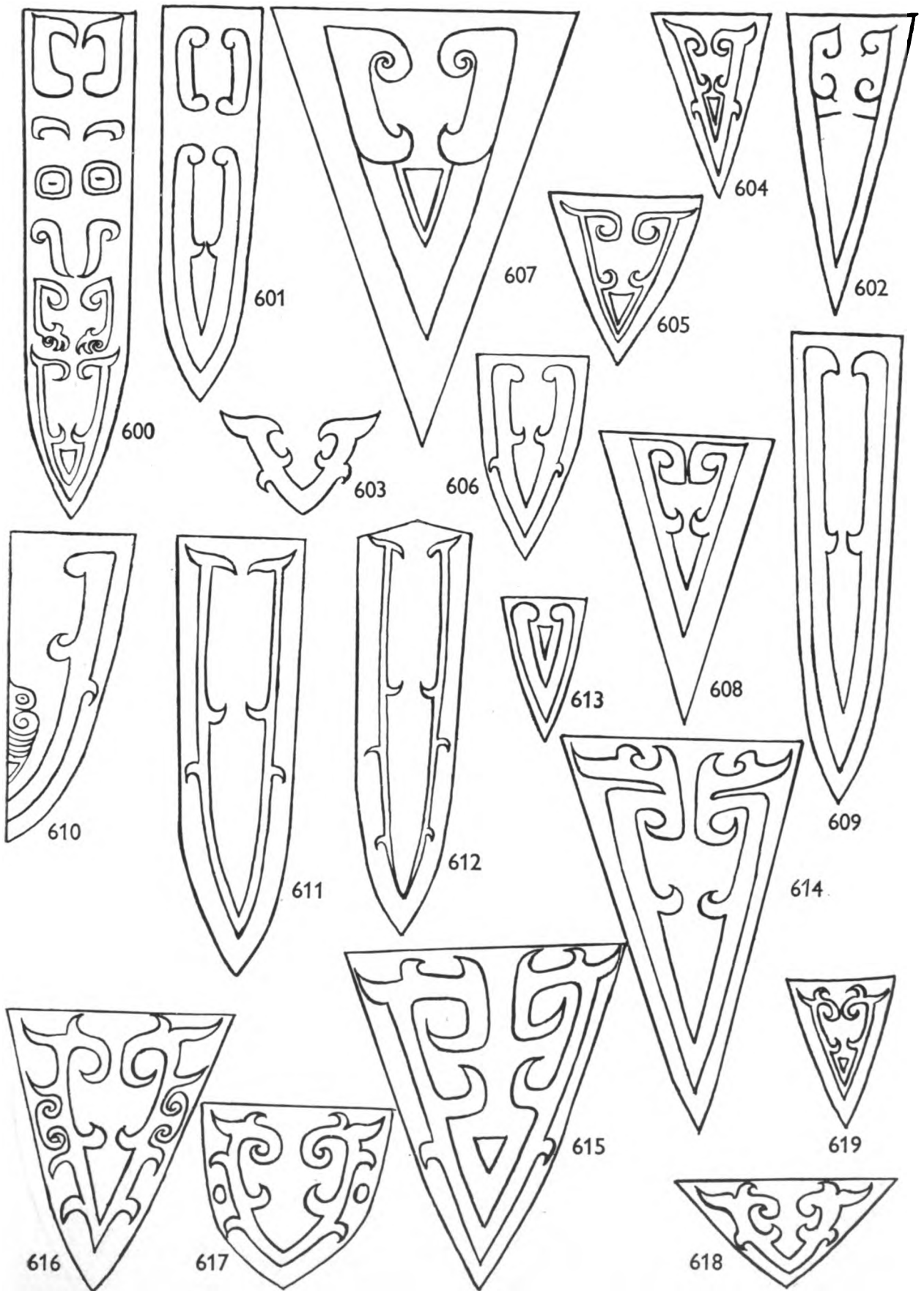
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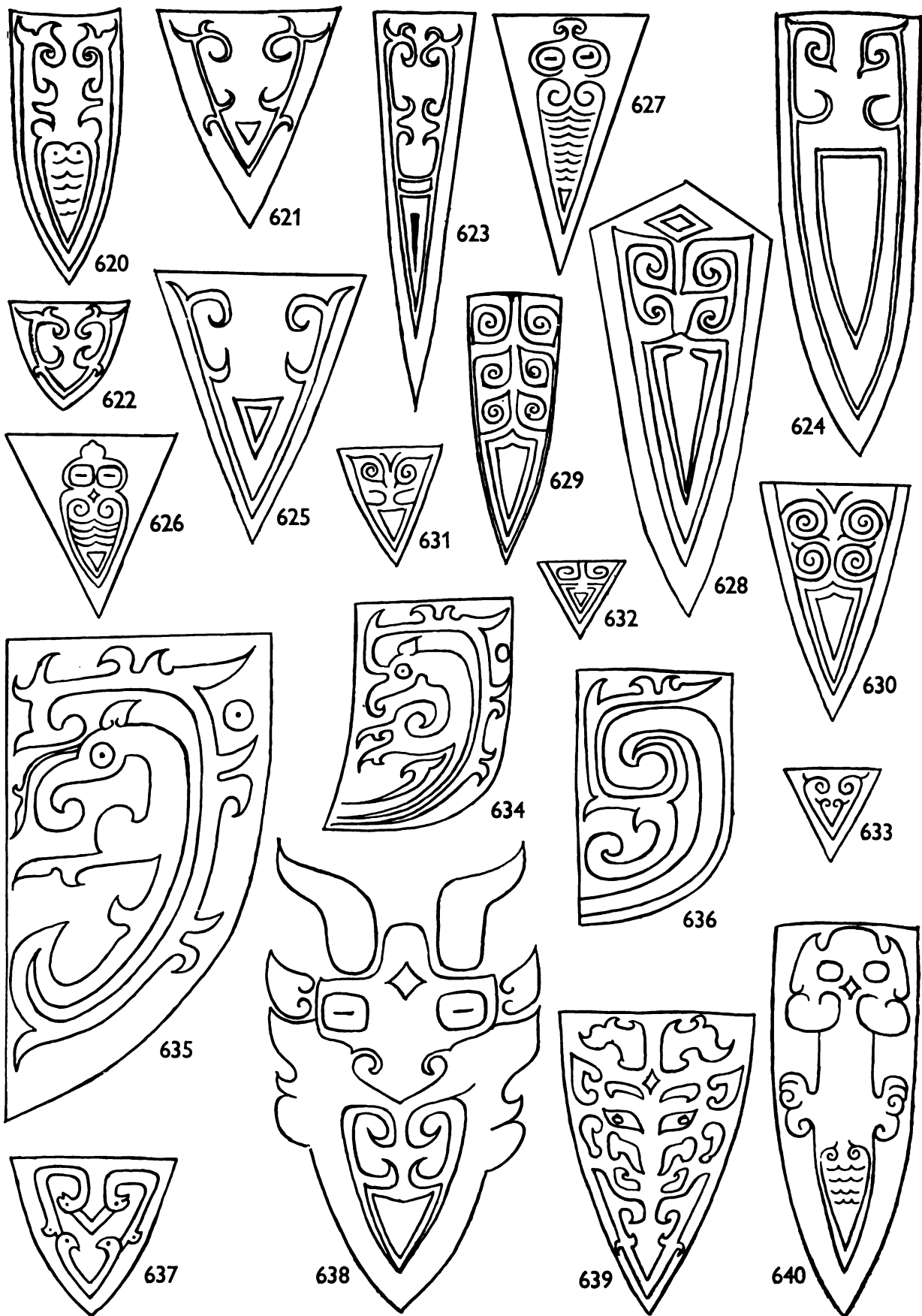


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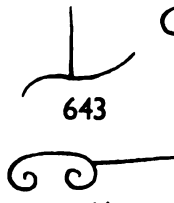




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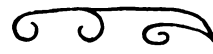


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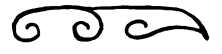


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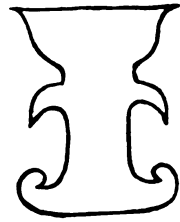
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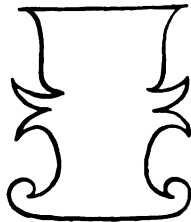
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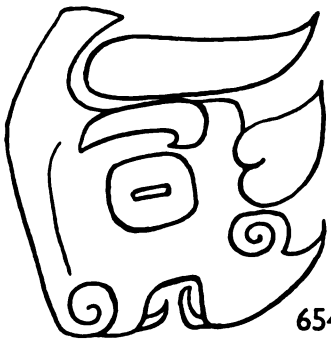
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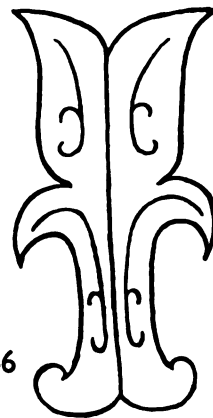
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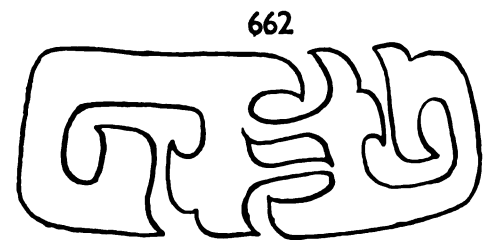
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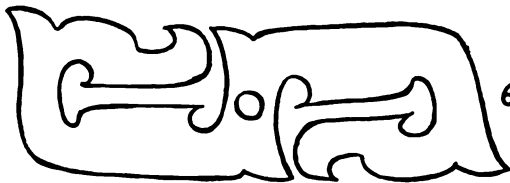
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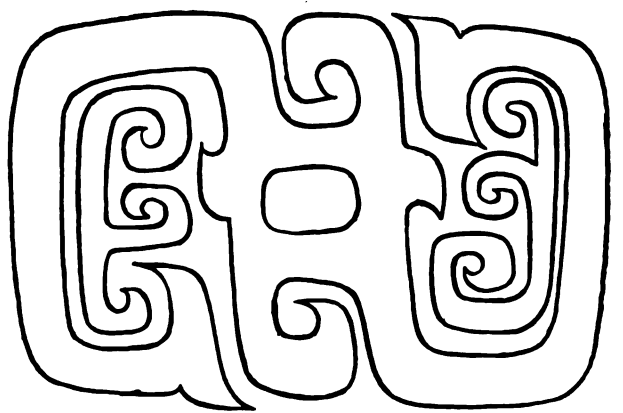
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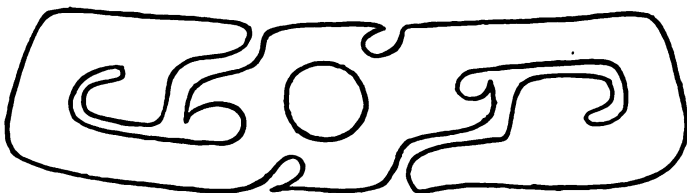
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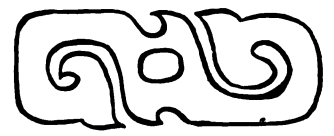
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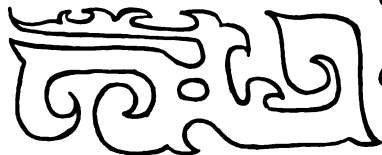
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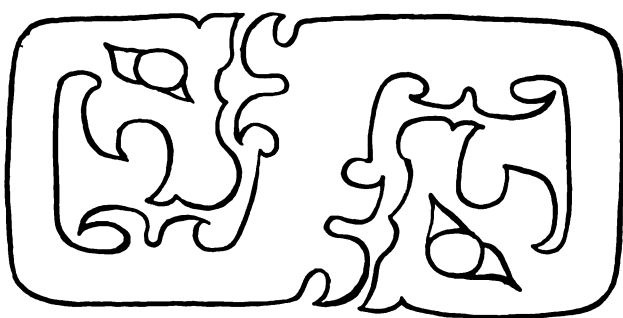
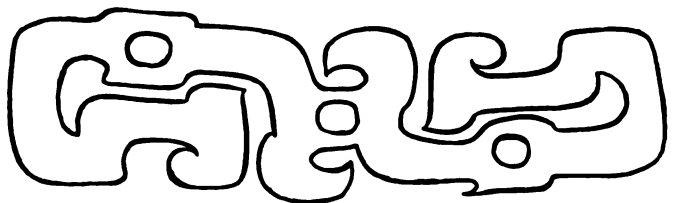


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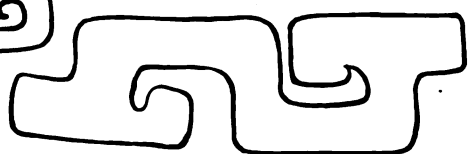
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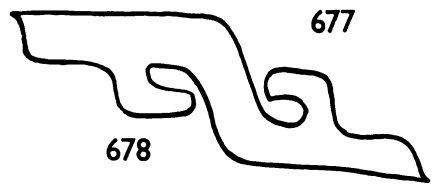
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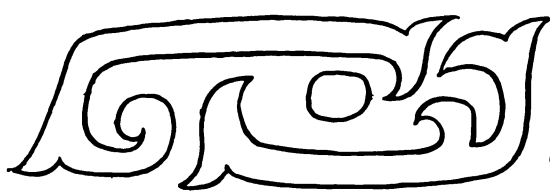
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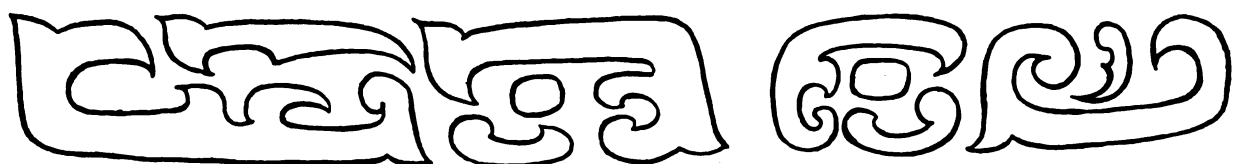
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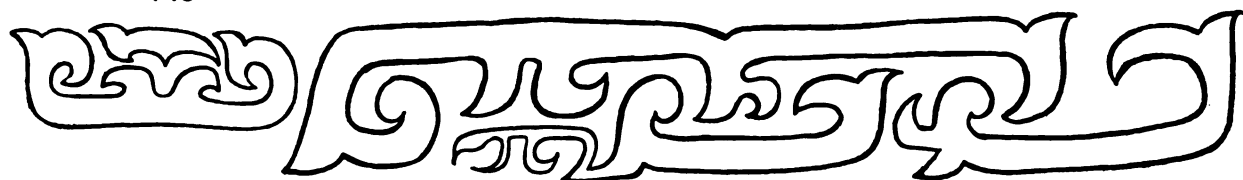


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b



a



c



b



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e



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e



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a



b



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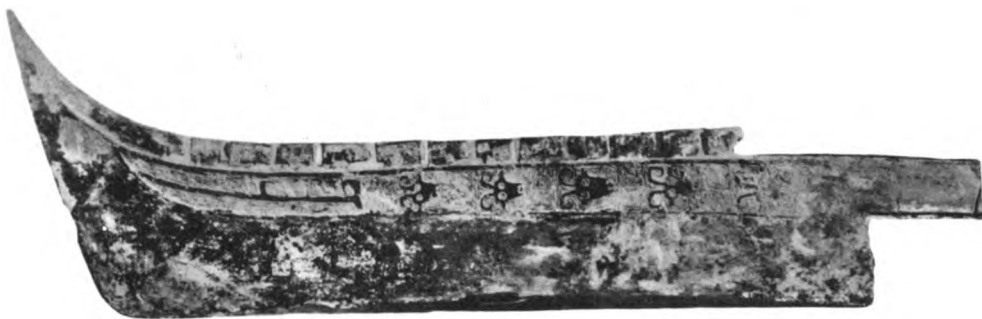


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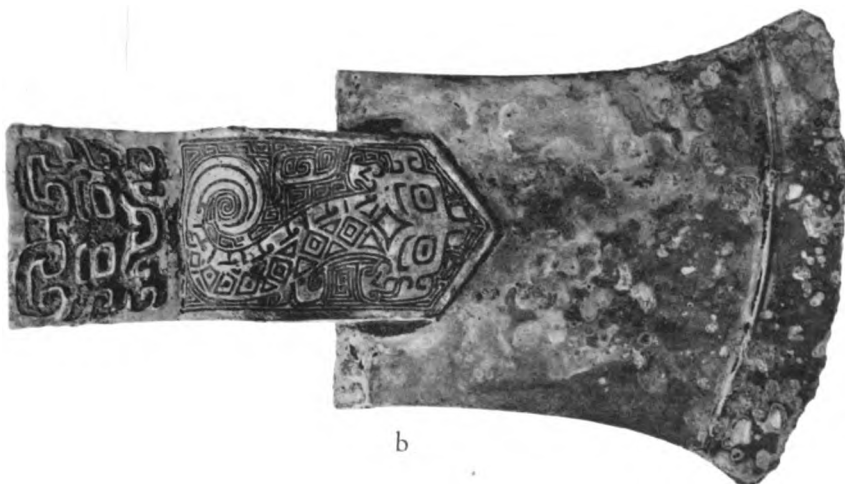


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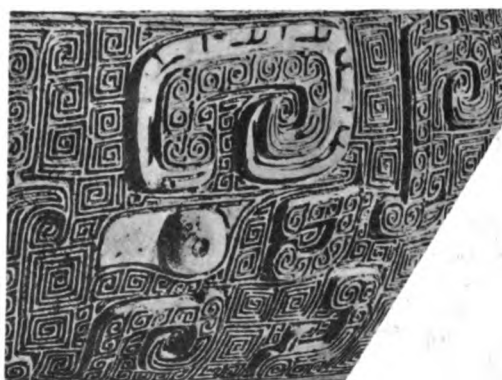
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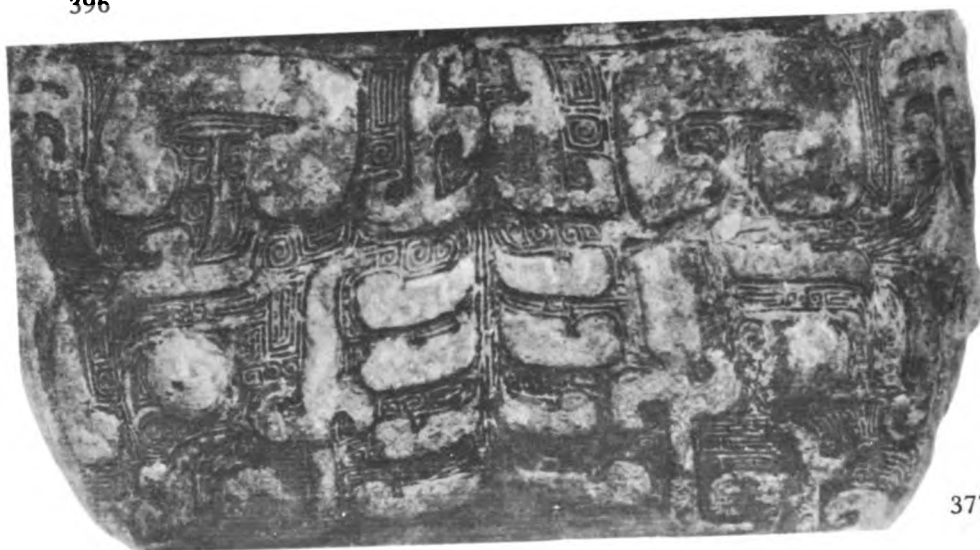
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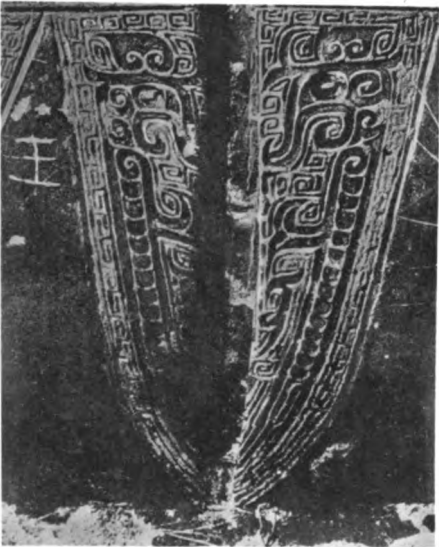
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THE TRANSCRIPTION OF LITERARY CHINESE

BY

BERNHARD KARLGREN

The problem of transcribing Chinese in Western letters — often called «the romanization of Chinese» — has given rise to controversies for more than a century. A great many transcription schemes have been launched and tried, but no internationally accepted system has so far been created. Above all, national spelling practices have dominated, so that the English write *chu* (at an early stage: *choo*), the French *tchou* and many Germans *tschu*.

The principal discussion has concerned Mandarin, the southern dialects, such as Cantonese, Hakka, Foochow, Swatow, Amoy, Shanghai, necessarily having their own and quite independent transcriptions (with which we are not concerned in the present paper).

In the transcription schemes for Mandarin there are two main currents (apart from the national propensities just mentioned).

On the one hand, some scholars advocate systems which are based exclusively on one Mandarin dialect, with a total disregard for every divergent feature in other Mandarin dialects. To this group belong two of the most successful systems so far propounded: the system of T. F. Wade, which is very widely accepted by English writers and occasionally also by American, German and Dutch; and the «National System» constructed by Yuen Ren Chao (Chao Yüan-jen) which has great merits and is rapidly gaining ground in the teaching of Chinese. Both these systems render pure Pekinese, even to the point of extreme localisms.

On the other hand, there are many scholars who prefer a system which, though in the main based on Pekinese, yet embodies some important features of other Chinese dialects. Thus, for instance, practically all French sinologues distinguish between *ki* : *tsi*, *hi* : *si* (in Wade : *chi* and *hsi* respectively), which, while agreeing with many southern dialects, also has a historical purport; and the same distinction, though formulated *chi* : *tsi* and *hsi* : *si*, recurs in one of the systems embodied in Mathews' dictionary. Furthermore, many sinologues indicate the «entering tone» *ju sheng*, now extinct in Pekinese (e. g. Couvreur and the system in Mathews just mentioned). Others again would keep the original *ai* (preserved in some Mandarin dialects) in the large class 皆 *kiai* etc., and the original *-en* (likewise

existent in many Mandarin dialects) in the important class 犬 *k'üen* etc. (see Mathews' dictionary).

But even those who advocate a system based exclusively on Pekinese have tried scores of different spelling modes, not being satisfied with Wade. The most radically aberrant of them is the National system just mentioned, which in the majority of cases prefers spellings other than Wade's. Other systems do not go so far, but they often have *ban : pan*, *dan : tan*, *gan : kan* etc. for Wade's *pan : p'an*, *tan : t'an*, *kan : k'an* (which latter is phonetically more correct). Some other authors, while accepting Wade's system in the main, have replaced some of his most unfortunate spellings by others, e. g. Mateer, who instead of Wade's *chih* and *tzü* writes *chī* and *tsī*, and who eliminates the meaningless *-h* which Wade sometimes introduced at the end of syllables, thus writing *pie* instead of *pieh* etc. Many writers likewise reject the unnecessary circumflex on *e* (*chen* instead of Wade's *chén* etc.).

So far the colloquial Mandarin. When it comes to the transcription of texts in classical or post-classical *wen hua* it has invariably been the rule to write each word as it is pronounced today in Mandarin (in one or other of the transcription systems just mentioned). This has seemed quite natural, since it is the custom of the educated Mandarin-speaking Chinese to read off the literary texts with the pronunciation of the words which they have in their spoken language. It should be pointed out, however, that this is not necessary, nor is it the only logical method. In some southern Chinese dialects we find, on the contrary, that literary Chinese is read with a pronunciation widely divergent from that of the colloquial. In Swatow, for instance, there are even three modes of pronouncing the words: one for classical texts, one for ordinary *wen hua* and one for colloquial¹); the divergences concern a very high percentage of the words. In Mandarin, on the contrary, only a small number of words have a different reading in *wen hua* from that in *pai hua*: mainly some *ju sheng* words, e. g. 'white' *po* (colloquial *pai*), 'not have' *mo* (coll. *mei*), 'give' *chi* (coll. *kei*), and a very few in other tones, e. g. 'car' *chü* (coll. *ch'e*).

Now, the practice to read off literary Chinese with the colloquial Mandarin sounds of the individual words leads to curious and highly awkward consequences. As long as it is a question of a colloquial passage which is transcribed in Western letters, it should be quite intelligible without the addition of Chinese characters, always supposing that the transcription system is logical and effective (giving all distinctive details in the pronunciation of the words, tones inclusive). Thus it should be possible to read off and to understand a tale in Pekinese written with Wade transcription only (without Chinese characters) or with the National System only, just as well as a spoken lecture can be grasped by the ear of a listener. It is true that the great number of homophones sometimes makes comprehension

¹) See J. Gibson, A Swatow Index, 1886. The words 大學 will there be: classical *Ta-hiok*, ordinary *wen hua Tai-hak* and colloquial *Toa-oh*.

difficult but the *pai hua* has created a series of elucidating devices to facilitate matters (e. g. classifiers, synonym-compounds etc.).

But at the very moment we apply our transcription — whether Wade, National System or any other Mandarin «romanization» — to the literary language, even though we do it carefully, with tones, all intelligibility becomes hopelessly lost. The extreme number of homophones raises insuperable obstacles, no longer mitigated by the tricks used in *pai hua* for elucidation. It is therefore impossible to transcribe a page out of Mencius or Tso chuan or an essay by Han Yü or a commentary by Chu Hi in one of our Mandarin «romanizations», discarding the Chinese characters, and still make it intelligible. It is simply impossible to understand a *wen hua* passage written with Western letters only which render nothing but the modern Mandarin sounds of the individual words.

This simple fact, well-known to every student of Chinese, has the immensely unfortunate practical result that in all our sinological publications: books, articles, reviews etc. we cannot possibly do without Chinese characters; whenever there is a Chinese word, a name, a book title, a phrase, a sentence or a passage in Chinese, it is necessary to insert the Chinese characters. A transcription in Wade or any other Mandarin system given alone, without characters, is inevitably unintelligible. In fact, since the Chinese characters are indispensable, the practice mostly followed in sinological literature is irrational. When leading sinological journals quote Chinese words, phrases or sentences first in transcription and then in Chinese characters, the former are really quite useless. Such transcriptions in front of the Chinese characters are really a meaningless waste of space and printing.

If, then, in the technical sinological literature, the transcriptions now current do not in any way make the Chinese characters superfluous, this means that only a very few printing offices can carry out the printing of sinological works, books or periodicals; and that even those few have to charge such prices as make the publication of sinological literature extremely costly. A great many valuable contributions, which could have been published if literary Chinese were intelligibly transcribable, now have to remain unprinted because of the prohibitive cost.

It is evident that if we could invent a system of rendering literary Chinese with Western letters (so simple that it could be written out on a typewriter) sufficiently distinctive to make a text transcribed in it intelligible without Chinese characters, it would be an immense gain to sinological studies: scholarly works could be published without difficulty, by any ordinary printing office (without any stock of Chinese type) and at not exorbitant prices.

The problem obviously lies in the distinction of homophones: those scores of words which are read alike and therefore become identical when written phonetically must be distinguished as effectively as they are when written with Chinese ideographs.

In the following discussion I propose to use two terms: *homophones* and *homonyms*. By homophones I mean two words which are pronounced alike but are not necessarily written alike, e. g. Engl. hare: hair, read: reed etc. By

homonyms I mean words that are both pronounced alike and written alike, e. g. Engl. down (below): down (on birds), well (good): well (water), etc. Homonyms are necessarily always homophones, but homophones are very often not homonyms.

Our transcription problem evidently lies in this: how can we prevent the numerous homophones from being, at the same time, homonyms?

The first expedient that comes to one's mind is to introduce a certain measure of historical spelling, which would distinguish in the written forms many words pronounced alike in Mandarin, just as in English an historical spelling differentiates homophones like right: write etc. Since we know through linguistic researches the pronunciation of the word, on the one hand, around 600 A. D. («Ancient Chinese») and, on the other hand, in early Chou time («Archaic Chinese»), it would be quite feasible to introduce such historical spellings; they would, to a certain extent, be analogous to the *wen hua* readings in dialects like Swatow, as described above. Take, for instance, the Pekinese final *-ien*, occurring in very large word groups. These could be split up into smaller groups by applying the values of Ancient Chinese, and several steps further by applying the values of Archaic Chinese (in the following examples we disregard the tones):

Pekinese	Ancient Chinese	Archaic Chinese
姦 <i>chien</i>	<i>kan</i>	<i>kan</i>
閒 <i>chien</i>	<i>kǎn</i>	<i>kǎn</i>
艱 <i>chien</i>	<i>kǎn</i>	<i>kɛn</i>
件 <i>chien</i>	<i>g'ïän</i>	<i>g'ïan</i>
建 <i>chien</i>	<i>kïvn</i>	<i>kïän</i>
見 <i>chien</i>	<i>kien</i>	<i>kian</i>
堅 <i>chien</i>	<i>kien</i>	<i>kien</i>
薦 <i>chien</i>	<i>tsien</i>	<i>tsiæn</i>
監 <i>chien</i>	<i>kam</i>	<i>klam</i>
險 <i>chien</i>	<i>kām</i>	<i>klām</i>
緘 <i>chien</i>	<i>kām</i>	<i>kɛm</i>
儉 <i>chien</i>	<i>g'ïäm</i>	<i>g'lïam</i>
潛 <i>chien</i>	<i>dz'ïäm</i>	<i>dz'ïem</i>
檢 <i>chien</i>	<i>kïvm</i>	<i>klïäm</i>
兼 <i>chien</i>	<i>kiem</i>	<i>kliam</i>
僭 <i>chien</i>	<i>tsiem</i>	<i>tsiæm</i>

Thus, to one final *-ien*, in Pekinese, corresponds ten in Ancient Chinese and sixteen in Archaic Chinese. In other words, a very strong and effective phonetic differentiation of the syllables in Archaic Chinese has already been considerably reduced in Ancient Chinese (Arch. *-ian*, *-ien* and *-iæn* having coincided in Anc. *-ien*, etc.) and to a large extent abolished in Modern Mandarin, in which a whole

long series of finals that were earlier well kept apart have coincided in one: *-ien*. Similar conditions obtain in regard to other finals. It is obvious, then, that the homophones will not be nearly as numerous in the literary texts if we transcribe them with the sounds of Ancient Chinese as they are when transcribed with the sounds of modern Mandarin, and that they are still further reduced in number in a most drastic way if we go so far as to transcribe the Confucian classics with the sounds of Archaic Chinese. There will still be a considerable number of homophones, it is true, even in Archaic Chinese and even among the commonest words (e. g. 成 城 誠 all Arch. *ǎiēng* in even tone), but not to such an extent that it would disastrously impair the intelligibility.

However, even if *wen hua* texts could be intelligible without Chinese characters if transcribed with a very strong admixture of historical features, it is quite obvious that this is not the proper solution of the problem, for the simple reason that the sinologues (except perhaps a few specialists in linguistics) can never be expected to take the trouble to learn such an archaizing mode of spelling. We must find other expedients to avoid all homophones being at the same time homonyms.

Our thoughts naturally turn to the *radicals*; after all, we are here concerned with literary Chinese and a system of transcription for the use of *scholars*. No serious student of literary Chinese can do without a thorough knowledge of the Chinese script and of some 4—5000 characters. He must know them perfectly and at once recognize their radicals, since he has constantly to use works like *Ts'i yüan* or *Ts'i hai*. Thus, there is nothing to prevent our drawing upon the radicals for distinguishing homophones and ensuring that they are not homonyms. After all, the radicals are, in the majority of cases, quite significant and helpful, e. g. 誠 *ch'eng*²⁻¹⁴⁹ 'sincere' contrasting with 城 *ch'eng*²⁻³² 'earthen wall'.

If we now try this road whole-heartedly, altogether discarding the idea of historical spelling, we may make an experiment and write out some *wen hua* texts in Wade Pekinese (or in National System Pekinese), with the figure of the radical added to each word, e. g. the first line in Mencius: *Sou*³⁻²⁹ *pu*⁴⁻¹ *yüan*⁴⁻¹⁶² *ch'ien*¹⁻²⁴ *li*³⁻¹⁶⁶ *erh*²⁻¹²⁶ *lai*²⁻⁹, *yi*⁴⁻⁸ *chiang*¹⁻⁴¹ *yu*³⁻⁷⁴ *yi*³⁻⁹ *li*⁴⁻¹⁸ *wu*²⁻³⁰ *kuo*²⁻³¹ *hu*²⁻⁴. The result is encouraging: a great many of the words will at once become clear to a reader who knows literary Chinese and Chinese characters. But it is still not quite satisfactory: the number of homonyms will still be far too great. More extensive tests very soon convince us that we must necessarily introduce a certain amount of historical spelling as well, in order to distinguish some of the still much too frequent homonyms. But it is evident that we should limit ourselves to what is absolutely necessary in order not to shock too much those who are used to the rendering of literary Chinese with Wade Pekinese forms.

In the fairly extensive experiments which I have made I have based myself on the Wade system, for the simple reason already stated: that it is, so far, the system most widely accepted (not unmerited, since it has its very good points).

But I have first of all applied those slight modifications mentioned above (*chī*, *tsī* for *chih*, *tzū*, *pie* for *pieh*, *chen* for *chên*).

As to the historical spellings which I have found necessary as a result of comprehensive tests, they can be limited to two: on the one hand, we have to distinguish between *ki : tsi* etc. (Wade *chi* etc.) and *hi : si* etc. (Wade *hsi* etc.), as already practised by all the French and many other sinologues. On the other hand, the *ju sheng* words have to be spelled with their original finals: *-k*, *-t*, *-p*.

These distinctions suffice, in fact, to distinguish words which in unmodified Wade are homonyms, to such an extent that a *wen hua* text so transcribed and with radical figures added to the words becomes intelligible to every scholar who knows *wen hua* and the ordinary stock of Chinese characters. In most cases the figure added after the transcribed word in modified Wade will tell him at once which word (and character) is intended.

That this measure of historical spellings introduced as a modification into the Wade system is sufficient to give lucidity in ordinary *wen hua* texts¹⁾ will be seen from the tables at the end of this paper. They comprise about 4900 of the most common characters in Chinese (quite an ample stock, being far in excess of those forming the first part of Soothill's dictionary) and in transcribing them according to the principles just mentioned we shall have no more than 233 cases of homonyms. This number is by no means fatal. It is a well-known fact that ordinary English has a great number of homonyms²⁾ and yet literary English is beautifully clear and unambiguous: the inconvenience of the homonyms is obviated by the context

¹⁾ Matters will be more complicated in sophisticated texts like *Liao chai chī yi*, which abounds in rare and difficult words (and characters); but more explicit means can then be used, see below.

²⁾ Even if we limit our selection to ordinary English words, it is easy to adduce great numbers of homonyms. We give here a selected list which (since many of the instances represent three different words) comes to about 300 examples of homonyms: arch, arm, art, ash, bait, ball, bark, bass, bat, batten, bay, bear, beetle, bill, bit, bloat, bloom, blow, boil, bolt, boom, boot, bore, boss, bound, bowl, box, brake, bray, breeze, broil, brook, buck, buffet, bull, bush, butt, can, cant, cape, caper, card, carp, case, chaff, chap, chase, chime, chink, chop, clam, cleave, club, cobble, cock, cod, cope, corn, count, cow, crab, cricket, dam, date, deal, desert, dense, die, dock, don, down, drill, duck, dudgeon, dun, egg, elder, fair, fast, fawn, fell, felt, fend, file, fine, fit, flag, fleet, fold, font, former, found, fray, fret, fry, gin, gloss, gore, grate, grave, ground, gum, hack, hail, halt, hatch, hide, hind, hip, hop, host, hue, jade, jam, jar, jetty, lade, lake, lap, lark, last, lawn, lay, league, lean, leech, left, let, lie, light, line, limp, list, letter, loaf, loom, loon, low, mail, march, mark, maroon, mass, mast, match, mate, mean, meet, mew, might, mine, mint, miss, mole, mortar, mould, mum, muse, nap, nave, neat, net, nick, paddock, pale, pall, pawn, peck, peer, pelt, perch, pie, pile, pitch, pluck, pole, pore, port, pound, prize, prune, pulse, punch, quail, quarry, quiver, race, rack, rail, rake, rally, rank, rape, rate, ray, rear, reef, refrain, rent, repair, rest, riddle, ring, rock, rook, rose, row, rum, rush, rut, sack, sage, sallow, sash, saw, scale, school, scout, scuttle, seal, see, share, shed, sheer, shiver, shoal, shore, size, skate, soil, sole, sound, spar, spill, spit, spoke, spruce, stable, stalk, steep, steer, stern, still, stole, stoop, story, stove, strain, strand, stroke, stud, supine, swallow, swarm, tang, tattoo, temple, tend, tender, tense, trick, till, tilt, tire, toil, toll, tract, trace, trap, trump, turtle, van, venal, vice, volt, wax, weigh, well, wise, yard.

clearly showing which of two homonyms (down 'below' or down 'fur' etc.) is intended. The same is true of the homonyms in our tables below.

It might be objected that 4900 characters are not sufficient for writing out literary Chinese and that, if we add some 2000 more characters, the number of homonyms will rise in a fatal way. Experiments have convinced me, however, that this risk is not very great; the homonyms do not augment as much as one might expect.

Moreover, in Chinese we have a means — not available in English — of reducing the homonyms still further. Obviously we can add, after the radical figure, a second figure, indicating the radical in what is left, after subtraction of the first radical. Thus 人 *jen*²-9 and 仁 *jen*²-9 can easily be distinguished by writing the latter *jen*²-9:7; 計 *ki*⁴-149 and 記 *ki*⁴-149 can be written: the former *ki*⁴-149:24, the latter *ki*⁴-149:49. This principle could easily be followed in all the cases of homonyms in our tables below, so that it is quite possible to eliminate every case of homonyms, which is impossible in English texts. But I am convinced that this method of additional elucidating figures will be necessary only in rare cases and need be used mainly in cases where the writer doubts whether his reader will recognize an unusual word with only its principal radical indicated.

In principle, then, we have arrived at the result that a modified Wade system with the addition of a few historical spellings and with radicals added after each word will suffice to transcribe a *wen hua* text, making the Chinese characters superfluous. But there remains the technical question: how can this transcription be «brushed up» so as not to look too clumsy and ugly?

Obviously, the first requirement is to eliminate Wade's tone-marks: the raised figures in the upper right-hand corner. They are impossible on a typewriter, are detested by the printers and cannot be maintained if we have to add radical figures behind. We must find tone marks which go organically into the transcription. It would seem natural to adopt Couvreur's diacritical marks on the vowels, e. g. *sie* (*hsie*¹) *sié* (*hsie*²) *siè* (*hsie*³), *sié* (*hsie*⁴), but though that would not shock a Frenchman, it would never be accepted by the English and American writers, still less by their printing offices.

I propose, therefore, a simple system which can easily be composed in the smallest printing office.

1) No tone mark at all indicates *shang p'ing sheng*, the Pekinese 1st tone, except in words with initials *l*, *m*, *n*, *j*, in which it indicates the *hia p'ing sheng*, the Pekinese 2nd tone¹), e. g.:

a) 休 *hiu*⁹ (*hsiu*¹), 東 *tung*⁷⁵ (*tung*¹), 穿 *ch'uan*¹¹⁶ (*ch'uan*¹)

b) 來 *lai*⁹ (*lai*²), 門 *men*¹⁶⁹ (*men*²), 難 *nan*¹⁷² (*nan*²), 如 *ju*³⁸ (*ju*²).

¹) Words with these initials never have the 1st tone, except a few colloquial words, e. g. 嗎, of no importance in the transcription of literary Chinese.

2) A semicolon between the syllable and the radical figure indicates *h i a p' i n g s h e n g*, the Pekinese 2nd tone, e. g.:

停 *t'ing;9 (t'ing²)*, 常 *ch'ang;50 (ch'ang²)*, 盆 *p'en;108 (p'en²)*, 何 *ho;9 (ho²)*
完 *wan;40 (wan²)*, 神 *shen;113 (shen²)*.

3) A colon after the syllable indicates *s h a n g s h e n g*, the Pekinese 3rd tone, e. g.:

井 *tsing;7 (ching³)*, 敢 *kan;66 (kan³)*, 裏 *li;145 (li³)*.

4) A hyphen after the syllable indicates *k' ü s h e n g*, the Pekinese 4th tone, e. g.:

丈 *chang-1 (chang⁴)*, 富 *fu-40 (fu⁴)*, 限 *hien-170 (hsien⁴)*.

5) Final *-k*, *-t*, *-p* (not pronounced) indicate *j u s h e n g*, the «entering tone», now lost in Pekinese but living in many Mandarin dialects, e. g.:

俗 *suk9 (su²)*, 栗 *lit75 (li⁴)*, 習 *sip124 (hsi²)*.

In Pekinese, the *j u s h e n g* words have been distributed over the first four tones, and it would, of course, be easy to indicate this secondary Pekinese tone as well, e. g. *suk;9*, *lit-75*, *sip;124*, but that seems quite superfluous, all the more since the tones of the original *j u s h e n g* words in Pekinese are often vacillating, e. g. 屬 *shu²*, ³, ⁴. In this very simple scheme: 1st tone no mark, 2nd tone ;, 3rd tone :, 4th tone -, 5th tone *-k*, *-t*, *-p*, there is thus only one exceptional rule to be remembered: that words in 2nd tone with initials *l*, *m*, *n*, *j* have no semicolon, but are written without tone mark, like those in the 1st tone.

It might be objected that a line in this transcription will be long and clumsy. But it should be observed that the transcription proper (in letters) occupies less space than Wade's, since the whole 1st tone and a part of the 2nd tone do without any tone marks at all, and that the adjoined figures for the radicals require no more space than the Chinese characters which, in the present practice, are added after the transcribed words.

There is, however, an important means of achieving a considerable simplification. If we select a series of common grammatical words (mostly auxiliaries) and transcribe them without addition of the radical number, the very fact that they lack such determinants singles them out as being grammatical words, and the reader will at once recognize which words are intended. This entails a very considerable saving of space. Our list of such words with simplified spelling is as follows:

<i>che</i> 者	<i>hu</i> 乎	<i>nai</i> 乃	<i>ts'i</i> 此	<i>yi</i> 以
<i>ch'i</i> 之	<i>jan</i> 然	<i>neng</i> 能	<i>wei</i> 爲	<i>yih</i> 矣
<i>chu</i> 諸	<i>jok</i> 若	<i>put</i> 不	<i>weih</i> 未	<i>yu</i> 有
<i>er</i> 而	<i>ju</i> 如	<i>sī</i> 斯	<i>wu</i> 無	<i>yü</i> 於
<i>fei</i> 非	<i>ki</i> 既	<i>so</i> 所	<i>wut</i> 勿	<i>yü'h</i> 于
<i>fu</i> 夫	<i>k'i</i> 其	<i>shī</i> 是	<i>ye</i> 也	<i>yüu</i> 與
<i>fut</i> 弗	<i>k'o</i> 可	<i>tek</i> 得	<i>yeh</i> 耶 邪	<i>ü</i> 與 歟
<i>ho</i> 何	<i>mok</i> 莫	<i>tsek</i> 則	<i>yen</i> 焉	

To this list might be added, with a view to the novel literature in early *pai hua*, the following items:

<i>chok</i> 著	<i>ma</i> 嗎	<i>pa</i> 把	<i>tsai</i> 在	<i>tsi</i> 子
<i>liao</i> 了	<i>mo</i> 麼	<i>tik</i> 的	<i>tsiu</i> 就	<i>yao</i> 要

It should be pointed out that the forms *weih*, *yeh*, *yih*, *yüh*, *yüü*, *ü* break away from the Wade system and are arbitrarily chosen spellings as contrasts to *wei*, *ye*, *yi*, *yü*. Observe also that there are no tone marks in our lists, except in the *ju sheng* words, such marks being here unnecessary.

Two important points remain to be discussed.

On the one hand, we must decide what to do with the numerous characters that have two or several readings. There is, for instance, 差, read *ch'a* when meaning 'to diverge', *ts'i* when meaning 'uneven'. Now, if we transcribe the latter *ts'i*48, the reader will rack his brains to identify the character, since *ts'i* is a very rare word. We must therefore proceed in another way. For each character we choose its most common reading or one of its most common readings and make that reading its »dictionary form», what the Chinese philologists call *ju ts'i* 如字 (see Lu Te-ming's *King tien shi wen*), regarding the other reading as a special variation. Thus the principal reading and hence the basic transcription of 差 is *ch'a*48, and in the other case we have to write *ts'i(ch'a*48). In the same way we have to write the first line in Mencius: *Sou:29 put yüan-(yüan:162) ts'ien*24 *li:166 er lai*9, since 遠 here is read in the 4th tone. This method of using a parenthesis may appear clumsy, but it is the only means of achieving clarity. On this point, however, a certain amount of compromise is advisable. The char. 差 has, besides its »dictionary reading» *ch'a* and its rare reading *ts'i*, a third reading *ch'ai* (when meaning 'to send out'), and since this reading is nearly as common as *ch'a*, it is not necessary to resort to the cumbersome mode of writing *ch'ai(ch'a*48), but we can write directly *ch'ai*48, for the reader will recognize a word *ch'ai*48 just as readily as the primary *ch'a*48. There are some 3 scores of such characters which will have double readings (since they are both common and easily recognized) in our tables below, cases like 乘 *ch'eng*;4 and *sheng*-4, 乾 *kan*5 and *k'ien*;5 etc.

The second point is more difficult. Wade's system is ruthlessly Pekinese: it renders even extreme local Pekinese peculiarities, aberrations from the general laws of phonetic evolution in Pekinese, without regard to other Mandarin dialects. Thus, for instance, 貞 ought to give Pekinese *cheng*, according to the ordinary »Lautgesetze», but for some reason still obscure it has given Pek. *chen* and so it is written in Giles, Mathews, Soothill, Fenn etc. But the majority of Mandarin dialects have *cheng* (we need go no further away from Peking than K'aifeng to find this) and there is no reason for us to incorporate this Pekinism in our set of standard readings. Somewhat different is the case of 城. This is not, like 貞, a

word living in the spoken language but a literary word. The Pekinese sien-shengs read it *hū* (Wade *hsū*¹) and so it is given in most dictionaries (e. g. Giles and Mathews) but the correct reading (given in Couvreur) is *k'ū* (Wade *ch'ū*¹), as is clearly indicated in the authoritative sources for literary readings, the Ts'ie-yün-Kuang-yün and the King tien shī wen. The aberration *hū* is due to the fact that 墟 is often written with the short-form 虛, and this character is in ordinary cases (= 'empty') read *hū* (*hsū*); hence ignorant sien-shengs have misread it as *hū* even when it stands for 墟, and furthermore have carried over this *hū* (*hsū*) to the rare character 墟. We have, of course, not the slightest excuse for perpetuating this mistake; Couvreur is entirely right. It would seem best, then, to give each word the reading which corresponds to the general laws of phonetic evolution in Mandarin (e. g. 貞 *cheng*), or (in regard to purely literary words) the reading which is indicated by the authoritative sources (e. g. 墟 *k'ū*); but these sound rules cannot, in fact, be applied without exception. There is, for instance, the common word 烏 which was Anc. Chin. *tieu*, and which should give Mand. *tiao*; but it is read *niao* etc. (with initial *n*-) in all Mandarin dialects, and must therefore be transcribed *niao*:196. Similarly 昆 Anc. *kuən* ought to be Pek. *kun*, but it is in fact pronounced *k'un*, and since the aspirate is general in Mandarin, we should transcribe it *k'un*:72.

On the other hand, a reading like 我 *wo* is a Pekinism, and with a view to Mandarin in general we ought properly to transcribe *o*:62. But the form *wo* (though really a localism) is so largely inculcated in sinological literature that a *wo*:62 will be recognized at once by most readers, whereas a *o*:62 would look very unfamiliar; hence it is best here to make an exception from the general rule and accept the Pekinism. Again, 六 has really in Peking the literary reading *lu*⁴, and we ought to transcribe it *luk*:12; but the transcription *liu* (colloquial reading) is so familiar to every student of Chinese, and so well supported by similar forms in other Mandarin dialects, that a transcription *liuk*:12 seems preferable.

In this way, a certain amount of compromise is needed, and our lists below are an attempt to find a reasonable «middle way». It will deviate, because of these considerations, from the readings in Mathews in a few cases; it also deviates from Mathews in a number of cases in which this dictionary is decidedly wrong (e. g. 檻, 困, 絳 etc). Since Mathews is the most widely used large dictionary today, I have thought it useful to add, in the lists below, an (M) after such words in which my reading and Mathews' are at variance.

In the transcription proposed above, the first chapter in Mencius will look thus:

Meng-37 tsī kien-47 Liang75 Huei-61 wang;96. Wang;96 yüet73: sou:29 put yüan-(yüan:162) ts'ien24 li:166 er lai9, yik8 tsiang41 yu yi li-18 wu;30 kuok31 hu? Meng-37 tsī tuei-41 yüet73: wang;96 ho pit61 yüet73 li-18, yik8 yu jen9:7 yi-123 er yi:49 yih. Wang;96 yüet73 ho yi li-18 wu;30 kuok31, ta-37 fu yüet73 ho yi li:18 wu;30 kia40, shi-33 shu-53 jen9 yüet73 ho yi li-18 wu;30 shen158. Shang-1 hia-1 kiao8 cheng60 li-18 er kuok31 wei;26 yih. Wan-140 sheng-4 chī kuok31, shi-79 k'i kün30 che, pit ts'ien24 sheng-4 chī kia40. - - - wan-140 ts'ü:29 ts'ien24 yen,

*ts'ien*²⁴ *ts'ü*²⁹ *pok*¹⁰⁶ *yen put wei put* *to*³⁶ *yih*. *Kou*¹⁴⁰ *wei hou*-⁶⁰ *yi*-¹²³ *er sien*¹⁰ *li*-¹⁸, *put tot*³⁷ *put yen*-¹⁸⁴.

In our tables below the radical figure has been written out only with the first word in each group; the reader can easily supply it in the following cases, the words being arranged in the order of the radicals. When the radical is the same in two words inside one group, i. e. when there is a case of homonyms, a small circle has been added after the second word, so as to make it easy for the reader to survey the frequency of the homonyms. As already stated, they are in fact quite rare (one case in twentyone characters).

The syllables have been arranged in the order of the unmodified Wade system such as we find it, for instance, in Goodrich's Pocket Dictionary. Hence, after our syllable *ch'eng* follow our syllables *ki* (*kik, kit, kip*) *si* (*sik, sit, sip*), because they correspond to Wade's syllable *chi*, which has its place after *ch'eng*, and they are followed by our *kia, kiang-tsiang, kiao-tsiao* etc. corresponding to Wade's *chia, Chiang, chiao* etc. After our syllable *hou* follow our syllables *hi* (*hik, hit, hip*) *si* (*sik, sit, sip*), since they correspond to Wade's *hsi*, and they are followed by our *hia, hiang-siang, hiao-siao* etc. which correspond to Wade's *hsia, hsiang, hsiao* etc. And after our syllable *t'ung* follows our syllable *tsi*, because it corresponds to Wade's syllable *tsü*. With these exceptions, the order is alphabetical.

a170阿 ai30哀唉埃挨 ai;64捱 ai:111矮藹 ai-61愛礙艾餵
 an40安庵菴諳鞍鷃 an:9俺 an-46岸按暗案闇 ang;26昂飭
 ang-108盎 ao;66熬熬翱遨鰲 ao:燠 ao-9傲奧懊澳 cha37
 痧渣 cha-4在詐柞 chak75柵蜡(M) chat64扎扎紮 chap118筭閘
 ch'a29叉差杈 ch'a;75查茶 ch'a-46岔汊詫 ch'at18刺察 ch'ap64插
 ch'ai210齋 ch'ai-9債寨瘵 ch'ai48差釵 ch'ai;9儕柴豺 ch'ai-142薑
 chan25占旌氈沾瞻粘蟾詹譚霽 chan:44展斬盞輦 chan-9佔戰
 暫棧港站綻蕪顛 ch'an64攪檐覘(M) ch'an;38嬋塵蹙禪纏
 蟬讒躔饒 ch'an:100產詔闡 ch'an-149讖 chang57張彰樟璋章
 耨麇 chang:64掌長 chang-1丈仗嶂帳杖漲瘴脹賬障 ch'ang38
 娼昌猖菖闔 ch'ang;9償當場常腸長 ch'ang;53廠敞袒 ch'ang-9
 倡唱悵暢韋毳 chao30嘲招昭朝 chao:64找沼爪 chao-10
 兆召旌耀照罩肇詔趙 ch'ao57招抄超鈔 ch'ao;47巢朝潮
 ch'ao:30吵炒 che162遮 che:125者赭 che-140蔗這鷓 chet30
 哲折浙蜚輟(M) chep61懾摺輒 ch'e159車 ch'e:64捨 ch'et60徹
 撤掣澈 chen68斟榛珍甄真礎歲臻鍼(針) chen:75枕畛疹紛
 診軫 chen-38娠振朕譖賑甌鎖陣震鴉 ch'en30瞋瞋 ch'en32
 塵宸忱晨沈臣辰陳 ch'en:142蜃(M) ch'en-75櫬疚襯趁 cheng9
 偵征徵楨(M)正丞爭曄楨(M)蒸諍貞(M) cheng:64拯整 cheng-64掙政
 正症證鄭 ch'eng64撐稱楨 ch'eng;1丞乘呈城懲成承橙澄程程誠
 ch'eng:162逞騁 ch'eng-115秤 ki32基姬莠機畸稽箕筭羅肌譏雞饑
 ki:16几己幾倚紀 ki-9伎冀妓季寄忌技既暨洎繼記計踞驥髻
 kik7亟劇(M)屐戟擊極棘殛激 kit30吉訖(M) kip29及急汲屐
 級給 tsi154賈躋濟 tsi:64擠 tsi-18劑濟祭際霽 tsik即寂畧
 瘠積稷籍績藉脊蹟迹鷓 tsit38嫉疾 tsip159輯集 k'i76欺溪
 谿 k'i;12其圻奇岐旂旗期棋歧淇琦畿疵祁祈祇藎耆頤騎麇
 k'i:30啓杞綺芑豈起 k'i-9企器契憇惕(M)棄氣汽 k'ik120給隙
 k'it5乞吃詰(M) ts'i15淒妻悽樓 ts'i;130臍齊 ts'i-112砌 ts'ik61

感威 ts'it 1 七榛漆沕。 ts'ip 120 緝葦 k'ic 9 佳加嘉家枷葭袞
 kia 9 假假罨櫟 k'ia 9 價嫁架稼駕 k'iat 62 夏 kiap 37 夾甲莢蛤頰
 k'ia 25 赤 k'ia 61 塞 k'iat 19 劫 k'iap 61 恰恰 k'iang 9 僵姜江疆薑韁 k'iang 85 港
 絳講 k'iang 119 鏡絳降 tsiang 41 將漿蔣 tsiang 37 漿 tsiang 22 匠將
 醬 k'iang 123 羌腔 k'iang 57 強 tsiang 75 槍踰鎗 tsiang 62 戕牆
 tsiang 64 搶 k'iao 8 交傲(M)嬌澆膠蛟郊驕 k'iao 9 佼姣矯攪。狡皎
 儼矯絞繳 k'iao 30 叫傲教校窖覺輟較。酵 tsiao 75 椒焦蕉 tsiao 18
 剿勦 tsiao 30 噍焦焦 k'iao 66 敲磽蹺 k'iao 9 僑喬橋翹蕎 k'iao 48 巧 k'iao 116
 竅 ts'iao 61 惟樵瞧 ts'iao 61 俏 ts'iao 9 俏俏 kie 9 偕喈咎
 街階 kie 148 解 kie 9 介价。屈戒界疥芥誠 k'iet 9 傑子揭桀桔。潔
 竭結詰 k'iet 19 劫 tsie 30 嗟 tsie 38 姐 tsie 9 借藉 tsiet 62 截櫟
 節 tsie 接捷。揖決睫 k'ie 140 茄 k'ie 75 楷 k'ie 61 怯慊愜。僭
 k'iet 挾鋏 ts'ie 1 且 ts'iet 18 切竊 ts'iet 38 妾 k'ien 12 兼肩堅姦奸
 緘艱兼間 k'ien 9 儉檢揀柬檢。減簡謫謫蹇鹵 k'ien 1 健件劍
 建鍵澗監艦見諫鑑鍵。間 tsien 42 尖莢戡煎箋 tsien 18 剪揃翦諫
 tsien 9 僭濺箭薦荐。賤踐餞 k'ien 61 愆慝(M)謙牽牽謙鉛騫
 k'ien 5 乾 箝虔鈐鉗。黔 k'ien 120 縑遣 k'ien 46 嵌歡兀緯災譴
 ts'ien 9 什僉。千攪簪簪。遷阡 ts'ien 18 前潛錢 ts'ien 85 淺 ts'ien 9 倩
 塹茜 ch'ü 49 危支枝知祇肢脂。芝蚘(之) ch'ü 27 底只咫。址指指旨
 枳止止時砥祉紙趾帶 ch'ü 9 值制質姦志伎。摯智治滯。痔穉緻置至
 致。製解誌贅雉鷺 ch'ik 64 擲植殖炙直織職躑跼隻 ch'it 38 姪帙
 桎秩窒質鉅 ch'ip 32 執汁戢(M)繫繫 ch'ü 30 嗤嗤癡咎絺蚩螭。鵠
 ch'ü 32 抵持池麓跣屣馬也 ch'ü 9 侈恥禡齒 ch'ü 86 戢(M)翅
 ch'ik 19 勑尺幟(M)敕斥赤飭 ch'it 30 叱喫(吃)。扶 kin 9 今巾斤筋
 紆襟金 kin 26 厔緊謹錦 kin 9 僅喋瑾姘斡禁覲近謹 tsin 85
 津侵 tsin 9 儘 tsin 64 晉晉浸燼盡縉賸進 k'in 76 釵衾 k'in 19
 勤擒(M)琴禽芹 ts'in 9 侵親 ts'in 115 秦 ts'in 40 寢 ts'in 85 沁
 king 8 京競涇矜經荊驚 king 9 倣到境景警頸 king 19 勁徑敬

競競選鏡 tsing70 旌晶睛精菁靖 tsing:7井 tsing-85 淨穿靖阱
 靜 k'ing9 傾卿輕 k'ing;64 擎鯨鯨 k'ing:181頃 k'ing-61 慶磬磬
 ts'ing85 清青 ts'ing;61 情晴 ts'ing:149 請 kiu-64 摺闥鳩 kiu:4久
 九灸糾韭 kiu-30 咎廐救樞疚究臼舅舊。tsiu-64 揪 tsiu:85 酒
 tsiu-43 就 k'iu1 丘蚯邱 k'iu;9仇球求球裘逮 k'iu:119 糗 ts'iu75
 揪秋鞦 ts'iu;162 適茜 kiung32 垌局 kiung:86 炯迥 k'iuang57
 穹 k'iuang;86 瓊瓊窮 chok9 倬卓啄捉擢。斲棹掇。濁濯。灼
 珣酌酌鐳 hot30 啜拙輟 ch'ok62 戩擲綽蹻蹻 ch'ot76 獸
 chou30 周州洲舟誦賄週周 chou:50 帚肘 chou-13 冑兇宙晝籀紂(M)綽。
 冑驟 ch'ou64 抽瘍 ch'ou;9 儔愁。籌綢綢讐躊酬 ch'ou:1丑
 醜 ch'ou-132 臭 chu9 侏朱株。珠殊蛛誅(諸)豬 chu:3 拄
 渚炷煮。臚宇塵 chu-9 住佇。助宇柱杼。注箸苴著。蛀註鑄駐 chuk30
 囑妯燭祝竹竺築粥躅軸逐 ch'u18 初姝樞畧 ch'u;9 儲廚勑踏
 鋤除雛 ch'u:75 楚楮。杵礎處褚 ch'u-141 處 ch'uk9 倣觸 ch'ut17
 出絀黜 chua190 鑿 ch'uai-30 最 chuan41 專輶輶 chuan:157 轉
 chuan-9 傳撰篆賺饌 ch'uan47 川穿 ch'uan;9 傳椽船遄 ch'uan:30
 喘舛 ch'uan-2 串釧 chuang38 妝庄樁莊莊裝 chuang-33 壯撞狀
 ch'uang104 瘡窗 ch'uang;50 幢牀 ch'uang:169 闕 ch'uang-18 創 丿
 chuei162 追錐 chuei:64 捶(M)筌(M) chuei-32 墜喘絀綴贅銼 ch'uei30
 吹炊 ch'uei;32 垂槌樵鎚陞 ch'uei:64 揣(M) chun130 脍諄 chun:15
 淮準 ch'un72 春椿 ch'un;85 淳純脣醇鵪 ch'un:142 蠢 chung2
 中忠盅終蠱衷鍾鐘。chung:14 冢塚種腫踴 chung-2 中仲眾重 丿
 ch'ung10 充忡椿春衝 ch'ung;46 崇沖蟲重 ch'ung:40 寵 ch'ung-167 銃 丿
 kü9 俱居据拘。踞裾車駒 kü:111 矩筭舉莒踞 kü-9 倨具句屨巨懼
 拒據。炬瞿矩竇詎屨踞距。遽鋸鉅颺 kük20 菊局掬詢踞鞠鵠
 küt75 橘 tsü140 蒞 tsü:85 沮 tsü-30 咀聚 k'ü23 區墟(M)區毆
 祛祛軀驅 k'ü;19 劬渠衢 k'ü-28 去 k'ük73 曲蚰麴 k'üt44 屈詘
 ts'ü140 苴(M)蛆趨隹(M) ts'ü:29 取 ts'ü-38 娶狙趣 küan38 娟捐

涓蠟 küan:64 捲畎(M) küan-9 倦卷狷眷絹 k'üan31 圈 k'üan;64
拳權髻 k'üan:94 犬綫(M) küan-18 券勸 ts'üan 61 悛詮銓 ts'üan;11 全
泉痊 küek75 柄脚覺角 küet15 決厥崛掘抉。決玦蕞訣譎。蹶
tsüek30 噉節雀(M) tsüet120 絕 küek26 卻慤確 k'üet104 瘡缺闕閱。
tsüek 鵲 kün30 君均軍鈞腐 kün-116 窘菌(M)郡 tsün-9 俊畷駿「
k'ün31 困(M) k'ün;123 羣羣 ts'ün117 竣遂 en61 恩 er;10 兒(而) er:89
耳適餌 er-7 二貳貳 fat9 伐發筏罰閼髮 fap4 乏法 fan50 幡
(M) 藩番番翻藩 fan;16 凡帆樊煩幡。繁蕃蕃蹻 fan:29 反返阪「
fan-75 梵汎汜。犯範范販飯 fang32 坊妨方芳 fang;63 房防魴「
fang:9 仿彷彿訪髣 fang-66 放 fei38 妃扉緋霏非飛香非 fei;130 肥
fei:22 匪悱斐斐篚菲誹 fei-30 吠廢沸沸翡(M)肺帶費 fen18 分吩紛芬
fen;32 墳粉氛(M)汾焚蕘 fen:119 粉 fen-9 份價。分奮忿憤。紛糞 feng2
丰封峯楓烽瘋葑蜂豐豐鋒風 feng;120 逢逢 feng-9 奉奉諷鳳「
fot 佛 fou;85 浮罍浮 fou:30 否缶 fou-卑 fu9 俘(M)夫孚(M)敷桴(M)
膚孚(M)鄒(M)鈇 fu:64 扶符芙鳧 fu:9 俯府拊撫。斧甫腐腑。脯輔輔
fu-9 付仆。傅。副咐婦富復父附訃負賦。赴釜附 fuk9 伏匐幅復服福縛
腹茯蝠複袱。覆輻馥 fut30 弗弗佛拂拂紱紱。第髻帶馱 hai;30 咳孩
hai:85 海醢 hai-8 亥害 han61 慙 han;17 函含寒涵酣(M)韓 han:122
罕菡 han-61 悍憾。扞撼。旱汗漢。瀚。煥翰鉞閑領臙 hang;75
杭航行 hao140 蒿 hao;30 皐毫豪 hao:38 好 hao-38 好昊浩皓耗
號鎬 hek203 黑 hen;104 痕 hen:60 很狠 hen-61 恨 heng8 亨
heng;61 恆橫衡 ho30 呵 ho;9(何)和河禾苛荷。ho-154 賀 hok19 劾
嚇壑核涸蠹赫鶴 hot30 喝曷紇褐鵠齧 hop30 合盒盍。闔 hou209
勑 hou;9 侯喉猴餗餗 hou:30 吼 hou-9 候厚后後逅 hi30 喜
嬉希晞熹熙。犧禧稀羲醢 hi:12 兮奚(M)後(M)攜(M)蹊(M) hi:30
喜 hi-9 係愜戲眈系繫。餽 hik75 檄閱 hit85 汔迄(M) hip30
吸歙翕 si93 犀西 si:60 徙蕙洗璽 si-120 細 sik36 夕媳席惜息。
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 峽狎洽狎狹恰陝 hiang 163 鄉香 hiang;8 享響餉饗。|
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 祥翔詳 siang;61 想 siang-9 像橡相象 hiao 30 囂島瘳 hiao;79
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 蕭蕭逍銷霄 siao;42 小 siao-30 嘯嘯笑肖 hie;149 諧鞋骸 |
 hie-61 懈械蟹邂駭 hiet 76 歎絜蠟 hiep 9 俠協扶脅 sie 7 些
 sie;68 斜邪 sie;40 寫瀉(M) sie-26 卸榭謝 siet 44 屑屑洩洩。
 綽薛褻 siep 86 變 hien 64 掀軒 hien;30 咸嬋嫌。弦痼絃銜
 賢閑閒鹹 hien;9 閒檢險顯 hien-61 憲檻(M)獻現縣覓陷限
 sien 9 仙先纖纖暹銑(M)鮮 sien;85 涎 sien;94 獮癢蹺鮮
 sien-120 線羨 hin 72 昕欣畝。訢 hin-164 髻 sin 61 心新薪
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 鏞 hiung 10 兄兇。凶胸訕 hiung;86 熊雄 hiung-66 寬 hui 30 吁
 噓。虛訐 hui;75 栩許翹。hui-86 煦 hui 72 旭洳蓄蓄頊 sül 30 胥
 需須鬚 sül;60 徐 sül;85 潛 sül-33 壻嶼序敘緒絮。sük 120 續 |
 süt 26 卹恤戌 huan 30 喧壘暄烜萱誼誼。huan;61 懸玄 huan-85
 炫炫眩絢銜 süan 40 宣 süan;70 旋 süan;162 選 hui 177 靴 |
 hui 39 學謔 hui 116 穴血 sük 18 削 siet 173 雲 hui 19 勳熏
 獮熏薰 hui-149 訓 sün 61 恂(M)洵(M)荀詢(M) sün;44 尋循旬巡 |
 馬川 sün-46 岫(M)洵殉浚(M) hu 30 呼撫撫 hu;33 壺弧湖煇狐
 瑚瓠(M)糊胡葫葫術餉鬪(半) hu;85 濟琬虎 hu-7 互瘳怙戶扈滬
 祐(M)護 huk 68 斛鵠 hut 31 囫忽笏 hua 140 花譚 hua;140 華 |
 hua-21 化獲畫話 huak 18 劃 huat 85 滑猾 huai;61 懷槐淮 |
 huai-32 壞 huan 76 歡謹獲驪 huan;31 團寰桓環紆還
 環髮 huan;85 澣皖緩莞 huan-30 喚免宦幻患換煥煥恭追

huang₆₁ 慌荒盪. huang₁₆ 鳳惶惶煌皇磺簧蝗蝗隍黃 huang₆₁
 恍晃詭 huang-7 况況况 huei₆₀ 數揮暉灰煇翬詼輝隳麾
 huei₃₁ 回徊洄茴迴 huei₆₁ 悔毀燬廼譏 huei-22 匯咏替慧惠。
 晦會潰繪蕙誨誨賄 hun₃₈ 婚悒昏萑閨 hun₈₅ 渾魂 hun-61
 混(M) hung₈₆ 烘薨轟 hung₄₀ 宏弘洪紅虹訔閔鴻 hung₃₀
 哄 hung-85 汞閔 huo₉ 伙夥火 huo-113 禍貨 huok₆₁ 惑或獲瘡
 穫鑊霍 huot₈₅ 活豁 yi₉ 依俛噫猗繫衣醫 yi₉ 倪儀夷姨
 宜彝怡疑移謫詒貽貽遺覓頤飴 yi₉ 俟已戾擬椅矣蟻 yi-4
 刈刈薙意懿。易曳殫穀泄異瘞義羿翳肄藝裔誼詣。議。饋 yik₈
 亦億噍場奕奕弋役憶抑掖。易溢液疫益溢繹翼翼。臆腋。譯鎰
 驛 yit₁ 一乙佚佻。洸軼逸 yip₆₁ 邑挹揖。邑 jan₈₆ 燃(然)
 髯 jan₁₃ 冉染 jang₆₄ 攘攘攘 jang₃₀ 嚷壤 jang₁₄₉ 讓
 jao₇₅ 撓蕘饒 jao₆₄ 擾繞 je₆₁ 惹 jet₈₆ 熱 jen₉ 人
 仁壬妊 jen₆₁ 忍恁。稔荏鉦 jen-9 任刃衽認. jen₉ 仍扔
 jit₇₂ 日 jok₅₇ 弱(若)若 jot₁₄₀ 蕪 jou₆₄ 揉柔蹂 jouk₁₃₀ 肉
 ju₇ 濡如濡茹孺 ju₅ 乳汝 ju-39 孺 juk₈₅ 潯辱辱褥 jup₁₁
 入 juan₁₄₂ 輭輓 juei₁₂₀ 縷 juei₁₄₀ 蕊 juei-85 汭睿蚘銳
 jun-85 潤閏 jung₄₀ 容戎榕榮。絨熔縈絨。茸蓉融 jung₁₄
 冗氈 kai₃₂ 垓該賅 kai₆₆ 改 kai-1 丐概蓋 k'ai₁₆₉
 開 kai₁₆ 凱愷鎧闥 k'ai-61 慨 kan₅ 乾干杆柑。甘疸
 竿肝 kan₆₁ 感敢橄稭趕 kan-51 幹盱榦紺 k'an₁ 堪斟
 看龕 k'an₉ 侃坎坎砍 k'an-19 勘看瞰行 kang₁₈ 剛岡扛
 杠綱缸鋼 kang₅₃ 康糠 k'ang₆₁ 慷 k'ang-8 亢仇抗炕
 kao₇₅ 龔羔篙糕膏皋高髻 kao₇₅ 杲稿。稿縞 kao-30 告誥 k'ao₄₄
 尻 k'ao₆₄ 拷烤(M)考 k'ao-93 犒靠 ken₇₅ 根跟 ken-138 艮
 k'en₃₂ 懇懇揜肯齒 keng₅₃ 庚更羹耕 keng₇₅ 梗取腭
 keng-7 互更 k'eng₃₂ 坑 ko₃₀ 哥柯(M)歌鵠 ko₃₀ 哿 ko-2
 个個箇 kok₃₀ 各格胳膊。閤隔革 kot₁₈ 割葛 kop₁₄₂ 蛤閤鵠

ko115科 k'o:30可 k'o-149課 k'ok 10克剋刻。咳客恪殼 k'ot85
 渴 k'op112石盍 kou20勾拘溝鈎 kou:94狗苟苟苟 kou-13
 莠垢够始媾。較構構靚詒購邁 k'ou64摳 k'ou:30口鈎「
 k'ou-30叩扣寇寇 ku38姑孤沽箍菇觚辜畝鵠 ku:9估古
 牯鹽瞽罟股臄。蠱詁賈鼓 ku-31固故痼錮雇顧 kuk75楷穀谷
 穀鵠 kut64捐汨骨 k'u18剝枯 k'u:140苦 k'u-53庫褲 k'uk30
 器酷 k'ut116瘡 kua38媯瓜媯 kua:40寡 kua-25卦掛掛詿
 kuat18刮颯鵠 k'ua37夸誇 k'ua157跨 kuai4乖 kuai:64
 拐拐 kuai-37夾怪 k'uai-17咄塊快篋 kuan14冠宮棺瘰觀
 關鰓 kuan:68幹管館 kuan-61慣灌盥裸罐觀貫鸛 k'uan40
 寬 k'uan:76款竅 kuang10光觥 kuang:53廣 kuang-162逛「
 k'uang22匡匡筐 k'uang:94狂誑 k'uang-32擴曠續 kuei9
 傀圭媿歸瑰皈規閨 kuei:40兇畧癸簋詭軌鬼 kuei-9僉創
 愧(M)揆(M)榷檜桂。膾萑貴跪饋餽。k'uei18剗奎(M)恢盍睽
 睽(M)窺虧闕 k'uei:34夔魁葵逵 kun85滾袞鯨 kun-75棍
 k'un32坤崑昆覬髡 k'un:64捆綑閫 k'un-31困 kung9供公
 功宮工弓恭攻肱蚣躬 kung:64拱石廣輦 kung-9供共貢 k'ung61
 忪空 k'ung:39孔恐 k'ung-64控空 kuo62戈(M)鍋 kuo:75果
 菓裹 kuo-162過 kuok31國擲號郭馘 kuot64括(M)聒 k'uok53
 廓擴 k'uot闊 lat18刺刺粹 lap64拉臘蠟 lai9來萊「
 lai-104癩賴賚。lan38婪嵐淋攔欄瀾藍藍蘭。闌闌 lan:61
 懶攬攢覽 lan-85濫爛纜 lang53廊榔狼琅簞琅郎
 lang:74朗 lang-85浪閭(M) lao19勞勞牢癆醪 lao:125老「
 lao-85潦 lek19肋泐勒 lei64擂累壘羸雷 lei:32壘磊
 累耒誅 lei-85淚累類 leng75校皎皎 leng:15冷 li38釐
 梨漓犁璃離羅狸蘆離黎 li:9俚履李理禮蠹裏禮里鯉 li-9
 例例。儷利勵厲吏戾泣痢癰。石厲癩莅荔。蠟雪隸麗 lik19力歷
 曆歷瀝麗鬲 lit15慄栗 lip117立笠粒 liang15涼梁涼

梁糧良量 liang:9倆兩 liang-8亮諒輞 Liao 9僚僚寥撩
 瞭繚聊遼 Liao:6了瞭蓼 Liao-86燎療(M)料 Liet15冽列
 冽烈裂 liep 94 𪔐𪔐 Lien 37 𪔐廉憐漣簾聯運連鏈鍊。」
 Lien:96璉 lien-66斂殮煉練鍊 Lin 75 林淋琳淋臨遴鄰隣
 霖鱗麟 Lin:15凜廩懔 Lin-30杏蘭質 Ling 9 伶凌圉淩綾
 翎聆菱鈴陵零靈鴿齡 Ling:46嶺領 Ling-9令另 Liu 18 劉旒
 榴流琉留瘤硫溜 Liu:75柳 Liu-85溜溜 Liuk 六 lo 118 蘿羅
 蘿螺羅駱 lo:130羸裸 lok 75 樂洛絡絡落酪駱 lot 捋 lou 9
 樓婁樓(M)樓婁 lou-85漏瘻鏤陋 lu 53 盧爐盧盧盧蘆盧
 鐘鷓 lu:64擄槽涵鹵虜魯鹵 lu-154賂路輅露鷺 luk 9 儻
 戮碌祿麓萊輓錄陸鹿麓。 Luan 37 孿鑾鸞 Luan:26卵」
 Luan-5亂 Lun 9 倫囷崙掄淪綸輪 Lun-149論 Lung 118 籠聾
 隆隴龍 lung:32壘攏籠 lung-55弄 Lü 169 閭驢 Lü:30呂旅
 縷膂 lü-44屢(M)慮濾 lük 120 綠 lüt 律 lüan 64 孿 lüan:130
 戀 lüan-61戀 lüek 64 掠略 lüet 19 劣埒 ma 104 麻蔴麻
 ma:96瑪碼嗎馬 ma-122罵 mai 32 埋 mai:154買 mai-154賣
 邁 man 109 瞞縵蠻謾饅 man:85滿 man-32嫚嫚慢慢
 曼蔓 mang 43 忙忙盲芒茫。 mang:140莽莽 mao 70 旄毛矛
 茅貓錨髦 mao:26卯昴 mao-13冒帽耄貌貿 mei 38 媒媚
 枚枚煤玫眉霉 mei:80每浼美 mei-媚妹。寐昧沫袂」
 men 9 們捫門 men:61懣 men-61悶 meng 83 氓蒙眈盟
 瞢朦蒙萌。蟲 meng:94猛 meng-36夢孟夢 mi 14 杲彌糜
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 仔姊子梓滓紫訾 ts'i-39 字忒漬自 ts'i:172 雌 ts'i;61 慈資疵磁祠
 茨詞 ts'i:77 此 ts'i-9 伺刺次薊賜 wal42 蛙 wa:98 瓦 wat64 挖
 襪 wai77 歪 wai-36 外 wan18 剋彎灣 wan;3 丸冠完頑
 wan:38 婉婉。宛挽晚盪輓 wan-96 玩(M)腕萬 wang85 汪
 wang;8 亡忘王 wang:60 往枉罔罔鬼罔 wang-妄旺望 wei38 威煨
 痿萎 wei;8 疊危唯圍嵬帷幃。微惟桅爲維薇違闍韋 wei:9 偉委
 尾猥葦韃 wei-9 位偽。味尉東(M)惟未渭渭畏穢緯(M)胃蔚衛謂諉(M)
 餽魏 wen85 溫瘟 wen;67 文紋聞蚊 wen:18 刎吻穩 wen-30 問
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 幄握渥 wu30 鳴惡污烏 wu;30 吾吳。巫梧毋無蕪蜈誣 wu:7 五
 伍侮。午廬忤武舞迂鴟 wu-19 務寤惡悟。悞。晤誤霧 wuk44 屋
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 隘 yang37 央殃泱秧鶯 yang;9 佯佯揚暘楊洋洋陽颺 yang9
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EXCURSIONS IN CHINESE GRAMMAR

BY

BERNHARD KARLGREN

In discussing the problems of Chinese literature, we must keep clearly in mind the difference between language and style. It is a well-known fact that the difference between literary Chinese (»w en h u a») and colloquial Chinese (»p a i h u a») is so great as to make them constitute two different languages, not only two different styles.

In all literate nations there has always existed a distinction between literary style and colloquial style. The narrative and descriptive parts in a novel, a short story, an essay or a history are written in a style noticeably divergent from everyday talk; and up to comparatively recent times even in rendering dialogues the authors have generally been (more or less unconsciously) influenced by the wish to write a refined language and have thus tampered with the rough colloquial language of their actors and brushed it up into a literary or at least a semi-literary style¹); it is the modern age which has for the first time dared consistently to let vulgar persons carry on their dialogues in a vulgar colloquial style that is entirely true to nature.

The difference between w en h u a and p a i h u a is something much more fundamental: the grammar is different, a different set of auxiliaries in w en h u a

¹) Thus, for instance, Jane Austen, *Pride and Prejudice*:

Chapter 5 (end): »Pride», observed Mary, »is a very common failing, I believe. By all that I have ever read, I am convinced that it is very common indeed; that human nature is particularly prone to it, and that there are very few of us who do not cherish a feeling of selfcomplacency on the score of some quality or the other, real or imaginary.»

Chapter 6 (beginning): »It may perhaps be pleasant», replied Charlotte, »to be able to impose on the public in such a case; but it is sometimes a disadvantage to be so very guarded. If a woman conceals her affection with the same skill from the object of it, she may lose the opportunity of fixing him; and it will then be but poor consolation to believe the world equally in the dark».

Chapter 8 (middle): »In nursing your sister I am sure you have pleasure», said Bingley, »and I hope it will soon be increased by seeing her quite well».

Ibid.: »I cannot comprehend the neglect of a family library in such days as these».

Chapter 10 (middle): »Would Mr. Darcy then consider the rashness of your original intention as atoned for by your obstinacy in adhering to it?» Ibid.: »You appear to me, Mr. Darcy, to allow nothing for the influence of friendship and affection. A regard for the requester would often make one readily yield to a request, without waiting for arguments to reason one into it».

Chapter 10 (end): »Do you not feel a great inclination, Miss Bennet, to seize such an opportunity of dancing a reel?»

from that of the *pai hua*; in many cases different constructions, e. g. the *so - - - che* 所者 of *wen hua*, no longer current in *pai hua*; simple words in *wen hua* replaced by binomes in *pai hua*; to a certain extent a different vocabulary of primary (i. e. not compound) words; and so forth. It has often been said that *wen hua* is to a modern Chinese what Latin is to a modern Italian. The analogy is not perfect, but there is a fair amount of truth in it.

The literary language, *wen hua*, which comprises many styles, e. g. the florid and elegant style of Mencius, the terse and simple style of Tso-chuan, the still more laconic style of many Han-time writers, the beautified style of the essayists of Liu-ch'ao, T'ang and Sung, the extremely sophisticated style of Liao chai ch'yi and the simple «easy *wen hua*» i. e. the practical normal prose e. g. in commentaries and hand-books, is fundamentally based, as everybody knows, on the great literary products of the Chou dynasty. After some brilliant first shoots in the early part of the dynasty (Shu king, Sh'king), there was the great rise of a full-grown body of literature in the centuries 500—200 B. C., the three greatest creative masters being Mencius, the Tso chuan author and Chuang-tsi. Through them the literary language in China attained to full ripeness, beauty and force. We know this literary language very well indeed, through fairly extensive texts, and though the archaic pronunciation of the words was until recently unknown, so that we have always had to read off the archaic texts with the pronunciation which the individual words have today in modern colloquial, now even the archaic sound system and the true readings of the texts have been unveiled during the past few decades. The literary language thus created in Chou time became the classical language of the Chinese *literati*, and up to our times the great majority of all writings (literary and practical) have been formulated in this «Latin of China», in many stylistic variants, it is true, as stated above, but essentially in the same language, with the classical grammar (auxiliaries, word sequence, constructions) and classical fundamental vocabulary.

So far all is plain sailing, these elementary facts being well-known to every student of Chinese. But then there are some aspects of these language conditions which are quite obscure and demand elucidation. We shall here discuss two of them:

1) Was the literary language, created by the great Chou writers, a mirror of the colloquial of that time?

2) When Liu-ch'ao, T'ang, Sung and later authors write in *wen hua*, it is evidently a «dead language», a petrified medium they use: every auxiliary, construction, phrase occurring in the *king* canonical books is capable of being used in their texts. But was it already so in Han time? When Han-time authors continued to write «classical Chinese», did they follow slavishly the grammatical patterns of the Chou writers, so that the *wen hua* «China's Latin» was already fossilized and unchangeable (not in style but as a language), indeed a dead language, from the beginning of the Han era?

I.

There are two diametrically opposite opinions on the former question. In 1926¹⁾ I argued that the Chou-time texts »are reproductions of the spoken language» of that era. It is important to observe that I meant by this that their language and the spoken language of the time was one and the same; but obviously there was the same difference of style as in most other early literatures, exemplified above (Austen) — it stands to reason that when a sentence was committed to writing it was not formulated exactly as a ruffian in the suburbs of Chou or a farmer in the fields of Lu would phrase it, but it was tidied up and probably made shorter and more polished. The important and fundamental point is that, in my opinion expressed in 1926, the grammatical system (auxiliaries, word sequence, constructions) and fundamental vocabulary were the same: the literary language was a normalized and moderately stylized reproduction of the colloquial in educated circles. In 1927 Henri Maspero, speaking of the time of Mo-tsi (5th c. B. C.), says²⁾ »Il n'est pas probable qu'à cette époque langue parlée et langue écrite aient beaucoup différé». And in 1928 Hu Shih, in his *Pai hua wen hüe shi*, indirectly expressed the same opinion (see below). These three pronouncements are quoted only as examples, they contain nothing new or original, the idea expressed is quite simple and natural.

Another group of sinologues, however, hold the opposite view. H. C. Creel wrote in 1936³⁾: »When Dr. Hu Shih says that classical Chinese has been a dead language for two thousand years, he evidently intends to imply that it was at one time actually spoken. Of the literature of the Chou dynasty Karlgren says that »these old texts are the natural reproduction of the spoken language». It is the opinion of the writer that this is impossible, that the language of the old texts could not have functioned as a spoken tongue. The writer has discussed this with a number of Chinese scholars, who have agreed without exception that this was, in their opinion, the case. In the first place, the language of the old texts was too laconic. . . . This brevity of the old texts has its good points, but it undoubtedly makes for difficulty of understanding. There are many passages which one could not possibly understand without the help of a commentary . . . And to suppose that this frequently equivocal medium could serve for the rapid and easy exchanges of conversation is, in the opinion of the writer and of those Chinese scholars with whom he has discussed the matter, quite mistaken. — Professor Karlgren says: ». . . that these old texts are the natural reproduction of the spoken language, is clear from the fact that the language is just as short and concise, with simple words, even when animated conversations or philosophical discussions were reproduced». There is nothing, however, to preclude the possibility that

¹⁾ *Philology and Ancient China*, p. 43.

²⁾ *La Chine Antique* p. 472.

³⁾ *T'oung pao* 32, p. 125.

conversations, like everything else, were reduced to the literary style when written». ¹⁾

In 1949 Homer Dubs²⁾ expressed the same idea: »Characters were painted upon these slips with a brush, using a predecessor of the present India ink. These slips could be tied up in bundles or laid flat for reading and writing. Both of these materials were, however, quite expensive. So, in writing, the Chinese developed a special style of wording different from that in speaking. It is largely what we use to-day in English for telegrams or newspaper headlines. All non-essential words are omitted. Subject, verb, object, or two of them may be left unexpressed. A sentence is sometimes reduced to one word, as in the English sentence, 'Fire'. Conjunctions and other words of relation are frequently omitted in this literary language, with the result that only the meaning can decide whether the author is writing one long complex sentence or a series of short ones, for signs of punctuation are nearly always omitted». The views of Creel and Dubs on this subject are undoubtedly shared by a great many scholars.

Both theories have so far been advanced mainly in the form of statements of conviction, and no real arguments of conclusive force have been adduced for either of them. And, in fact, it is very difficult to find any definite proofs in either direction. But there are, after all, some highly revealing facts.

In the first place we must ask whether it was actually possible for a listener to grasp a sentence of Lun yü or Meng-tsai or Tso chuan when read aloud during the Chou era. It is well known that, when read aloud today with the sounds of modern Chinese, it is entirely impossible to understand, the homophones being too numerous and the confusion they cause not being mitigated by the various grammatical aids created in modern colloquial (synonym compounds, classifiers etc.). But was it more intelligible in Chou time, read with the archaic sound values of the words? It most decidedly was. Modern Pekinese has about 420 different syllables, not counting the tone distinctions, in which the whole vocabulary has to be compressed. Corresponding to this we find in Archaic Chinese, such as it is reconstructed in my *Grammata Serica*, about 2250 different syllables, again not counting the tone distinctions. This rich phonetic variation in Archaic Chinese reduces the number of homophones most drastically. There are still a great number of them, as can easily be seen in the *Grammata* (where, however, the tone distinctions are not indicated), but not to such an extent that it would make an ordinary sentence unintelligible when read aloud. As a matter of fact, the homophones will not be so much more numerous than in modern English, in which they are surprisingly frequent, without any results detrimental to lucidity³⁾. The book of

¹⁾ Creel illustrates this latter phenomenon by an example from Han time which has no bearing on the conditions in Chou time.

²⁾ China, the land of humanistic scholarship p. 5.

³⁾ Cases like right : write, hare : hair etc. are extremely frequent in English, and particularly among the most common words (to : two : too, not : knot, here : hear, I : eye, still : still, see : sea, we : wee,

Mencius, written out in western letters according to the sound system reconstructed in the Grammata, and provided with a vocabulary at the end in the same medium, all without Chinese characters, would be perfectly intelligible and, indeed, a most useful textbook for beginners in classical Chinese. There can thus be no doubt that the pronouncements of Confucius, in the formulation they have in the Lun yü, if read aloud by the disciples some decades later with the pronunciation of the words then current, were perfectly intelligible to the listeners as far as the phonetic distinctions were concerned. The individual words were sufficiently differentiated phonetically to be kept apart; the recorded lectures of Confucius might very well represent his normal, educated spoken language.

But the question still remains: Did they in fact represent it? We shall examine a clue which may help us to answer that question.

There is a curious phenomenon observable in many Chou-time texts: A personal name is sometimes provided with an enclitic particle *ye* 也, e. g. Lun yü 2: 9: *Huei-31 ye put yü;61*. »Huei is not stupid».

It should be emphasized at once that this is not a case analogous to those in which a *ye* sets apart a phrase, in an absolute position, as subject of the clause. *Ye* is common in this latter function, closely resembling the *wa* in Japanese: *kodomo wa naite imasu* »as to the child — it is crying», i. e. »the child is crying». So we have *ye* e. g. in Lun yü 5: 16: *k'i shi-6 shang-1 ye king-66* »as to his serving the superiors, it is respectful», »his serving the superiors is respectful»; Lun yü: 8: 4 : *k'i yen;149 ye shan-30* »as to his words, they are good», »his words are good». This function of *ye* leads on to its forming subordinate clauses, e. g. Lun yü 9: 6 : *Wu;30 shao-42 ye tsien-154* »as to my being young — (I) was lowly», »when I was young, I was lowly».

Our cases of *ye* as an enclitic of Nomina Propria have really no connection with this use of *ye*, for they do not necessarily occur in the nominative (as subject) but in other cases as well, e. g. Li: T'an Kung: *Tsi chi put shi;9 Pok106 ye sang30 chi ho ye* »that you, Sir, have not made Pok bury her, why is that?» (here *Pok ye* is object); *ibid.*: *Shi wei Pok106 ye mu;80* »She was Pok's mother» (*Pok ye* is genitive); Tso: Ai 6 : *Fan;29 u Jen;33 ye ch'u;141* »Return and live with Jen» (*Jen;33 ye* is dative). This curious employment of *ye* as an enclitic on Nomina propria is a point of such a great interest that it is desirable to make a comprehensive list:

Lun-yü (Legge's ed.): p. 13: *Huei;31 ye*; pp. 25, 37: *Si-154 ye*; p. 38: *Yung172 ye*; p. 39: *Yu;102 ye*, *K'iu;85 ye*, *Ch'ik155 ye* (bis); p. 40: *Huei;31 ye* (bis), *Si-154 ye* (bis); p. 41: *Ch'eng;75 ye*, *Si-154 ye*; p. 48: *Yung172 ye*; p. 51: *Yu;102 ye*, *Si-154 ye* (bis), *K'iu;85 ye* (bis); p. 52: *Huei;31 ye*; p. 69: *K'iu1 ye*; p. 87: *Huei;31 ye*; p. 89: *Yu;102 ye*; p. 102: *Huei;31 ye*; p. 103: *Lu195 ye*; p. 104: *Huei;31 ye*; p. 105: *Yu;102 ye*; p. 106: *Yu;102 ye*, *Shang31 ye* (bis), *Shi-50 ye*; p. 107: *Ch'ai;75 ye*, *Shen28 ye*, *Shi50 ye*, *Yu;102 ye*, *Huei;31 ye*; p. 108: *Yu;102 ye*, *K'iu;85 ye*; p. 109: *Ch'ik155 ye*, *K'iu;85 ye*, *Yu;102 ye*;

seen : scene, for : four, there : their, be : bee, you : yew, might : mite, no : know, by : buy, can : can, so : sow, some : sum, but : butt, in : inn, made : maid, one : won, our : hour, down : down, done : dun, would : wood, may : May, must : must, saw : saw) with the result that a page in an English book teems with words which have homophones in the language.

p. 110: *K'iu:85 ye*; p. 111: *Yu:102 ye, K'iu:85 ye*; p. 113: *Yu:102 ye, Ch'ik155 ye*; pp. 121, 127: *Yu:102 ye*; pp. 151, 159: *Sî-154 ye*; p. 172: *K'iu1 ye*; p. 173: *K'iu:85 ye*; p. 183: *Yen: 9 ye*; pp. 185, 186: *Yu:102 ye*; p. 192: *Yü6 ye*; p. 194: *Sî-154 ye*; p. 208: *Chang57 ye*.
Meng (Legge's ed.): p. 180: *K'iu:85 ye*; pp. 249, 305: *K'ol59 ye*.

T'an Kung (Couvreur's ed.): p. 111: *Pok106 ye*; p. 112: *Kip9 ye* (bis), *Pok106 ye* (bis); p. 114: *K'iu1 ye*; p. 120: *Chung2 ye*; p. 137: *Sî-154 ye*; p. 145: *K'iu1 ye*; p. 155: *Hu:141 ye*; pp. 164, 165: *Shen28 ye*; p. 222: *K'uang-72 ye*; p. 252: *Wu:77 ye*; p. 253: *K'iu1 ye*.

Tso: Wen 1: *Kuk115 ye* (bis); *ibid.* *Nan172 ye*; Suan 4: *Tsiao75 ye*; Siang 3: *Wu:24 ye*; *ibid.*: *Ch'ik155 ye*; Siang 8: *Fei187 ye*; Siang 21: *Hot120 ye*; Siang 24: *K'iao:9 ye*; Siang 26: *Chu75 ye*; Siang 29: *Kit30 ye*; *ibid.*: *Ts'i:210 ye*; Siang 31: *Miet140 ye*; *ibid.*: *Wu:24 ye*; *ibid.*: *Fu-195 ye*; Chao 2: *Yin-26 ye*; Chao 13: *Fu-195 ye* (quater); Chao 17: *Fang:195 ye*; Chao 25: *Kit30 ye*; *ibid.*: *Yang177 ye*; *ibid.*: *Ki122 ye*; Chao 24: *Jung62 ye*; Ting 8: *Meng:94 ye*; Ting 13: *Shu-62 ye*; Ai 6: *Jen33 ye*; Ai 11: *Sü181 ye*; Ai 13: *T'uei:194 ye*; *ibid.*: *Ho:9 ye*; Ai 15: *Ch'ai:75 ye*; *ibid.*: *Yu:102 ye*; Ai 20: *Yen:203 ye*.

Kuo-yü: Chou B: *Chao74 ye*; Lu B: *Fei:130 ye*; Tsin B: *K'uan:76 ye* (bis); *ibid.*: *Ki:49 ye*; *ibid.*: *Yen:9 ye*; Tsin C: *Juei-140 ye*; *ibid.*: *Cheng-163 ye* (six times); Tsin D: *Yen:9 ye*; *ibid.*: *Mao82 ye*; *ibid.*: *Shuai145 ye*; Tsin E: *Küet27 ye*; *ibid.*: *K'ok10 ye* (ter); *ibid.*: *Step86 ye* (bis); Tsin H: *Yen:9 ye*; *ibid.*: *Yang177 ye*; *ibid.*: *Chu75 ye*; *ibid.*: *Hit130 ye*; *ibid.*: *Pao-153 ye*; *ibid.*: *K'i:156 ye*; Tsin J: *Fu-195 ye*; *ibid.*: *Mit130 ye*; *ibid.*: *Tok167 ye*; *ibid.*: *Siao-40 ye*; *ibid.*: *Ti-32 ye*.

Chuang (Harv. Yen. index text): 2: 76 and 2: 83 and 5: 3 and 5: 33 and 6: 93 and 21: 25: *K'iu1 ye*; 12: 49 *Mien-140 ye*; 24: 74, 75: *K'un:75 ye*; (24: 92 *Kou30 Tsien-157 ye*; 24: 100 *Chung-115 ye*).

Mo (Harv. Yen. ind. text): 49: 82: *Ch'ok120 ye*.

Lü: Ch'i-lo: *Ch'ang72 ye*; Huei-kuo: *Ping:1 ye, Shut144 ye, Shi-147 ye*; Ta-yü: *Küet29 ye* (bis), *Tok167 ye* (bis); Fen-chi: *Ch'un72 ye* (ter).

Hanfei: Wai ch'u yu shang: *Wen:38 ye*.

Kuo ts'e: Ts'i B: *Yen:144 ye*; Ch'u B: *King-19 ye*; Chao C: *Sheng-19 ye*; Chao D: *Tan3 ye*; *ibid.*: *Shun-181 ye*; Wei B: *Tai-9 ye*; Han A: *Ming72 ye*.

Interesting in itself, this peculiar use of the enclitic *ye* with Nomina Propria gains an extreme importance from the fact that it occurs exclusively in quotations of spoken utterances, in Oratio Recta. There is really a strictly observed contrast here between the narrative style and the Oratio Recta. We have seen above examples of »X-ye» in Oratio Recta in the Lun yü; the same work has scores of examples of a Nomen Proprium in a narrative sentence, and then it never has the enclitic *ye*. For instance 5: 9: *Tsai:40 Yü:6 chou-72 ts'in:40* »Tsai Yü slept in day-time». It would have been entirely impossible and contrary to the grammar of classical Chinese to write here: *Tsai:40 Yü:6 ye chou-72 ts'in:40*. It is quite the same throughout voluminous texts like Tso chuan and Kuo yü; there are thousands of cases in which the subject of a clause is a Nomen Proprium, but it is never provided with the enclitic *ye*, unless it be in an Oratio Recta. This phenomenon is of paramount interest. The enclitic *ye* is to some extent analogous to the article in German colloquial: »Der Fritz hat gesagt»; »der Schmidt ist eben gekommen»; »haben Sie den Heinrich gefragt?», etc. In ordinary literary style this article is not allowed, it belongs exclusively to the spoken language. Exactly the same is true of our enclitic *ye* here in archaic Chinese.

The scores of conversations in which these *X-ye* occur, as registered above, are written in all other respects in exactly the same classical language as the entire literature, narrative and descriptive. If Dubs were right in thinking that this is a kind of telegraphic-style abbreviation of the real, living language of the time, and if Creel were right in saying that the conversations in colloquial were translated into this artificial telegraphic language, when written down, it is quite inconceivable why this single particular feature of the spoken language, the enclitic on names, should so often be faithfully preserved: it ought to have been, in such a translation, the very first superfluous colloquial element to be erased. Indeed, the very fact that there is a consistent contrast between *X-ye* in spoken utterances and *X* in narrative passages definitely precludes the possibility that both quoted utterances and narratives were formulated in one and the same artificial, lapidary telegram-style language, differing so radically from the archaic colloquial as to be unintelligible if apprehended by the ear alone.

Our *X-ye* phenomenon is priceless, for it reveals that the recorded conversations are reproductions — on the whole quite faithful reproductions though of course to some extent »tidied up» — of the real oral conversations which they represent. In these extensive quoted conversations we have a mirror of the colloquial of the Chou era, faithful to about the same extent as Jane Austen's dialogues to the spoken English of her time. And since the narrative and descriptive texts have quite the same language (auxiliaries, word sequence, constructions, vocabulary) as these lengthy conversations with but very modest divergences, notably our contrast *X-ye* : *X*, we can conclude that the literary language of Chou, what we call Classical Chinese, was very closely akin indeed to the colloquial of the time, being merely a stylistically somewhat pruned version of that colloquial. Classical Chinese was to the Chou colloquial approximately what literary English around 1800 was to colloquial »Londonese» of the same epoch.

II.

It is a generally accepted thesis that classical Chinese (*k u w e n*), the literary language of the great Chou-time writers, became the »Latin of China» at an early date, a dead language insofar that its grammar (auxiliaries, constructions) could no more be changed but was perpetuated in the form in which it was to be found in Confucius and Mencius, Mo-tsi and Chuang-tsi, Tso chuan, Kuo yü and Li ki etc. It had become the standard literary language once and for all time, and the only changes it underwent in subsequent ages were stylistic variations and a certain number of additions to the vocabulary. Hu Shih¹⁾ quotes a memorial to the throne by Kung-sun Hung in the reign of Wu-ti (2nd c. B. C.) which complains that the edicts written in the literary language were incomprehensible not only to the great public but also to the lower officials, and Hu concludes that the *K u*

¹⁾ Hu Shih, *Pai hua wen hüe shi*, first chapter.

w e n, i. e. classical Chinese, was already at that time a »dead language», an artificial instrument radically divergent from the living language of the people. The literary language has been dead »for more than 2000 years» and consequently incapable of undergoing an organic evolution under the influence, and as a consequence, of the gradual changes in the spoken language.

Is this a true picture of what has happened in the literary world of China?

We shall take a sample test from middle Han time, and select one of the most important, independent and talented authors of the whole Han era, the philosopher Wang Ch'ung (27—100 A. D.), whose work *Lun heng* is very extensive and thus affords a good means of grammatical analysis with frequency tests.¹⁾

Hu Shih, in his work just quoted (chap. 4), has tried to vindicate that this Wang Ch'ung was a first champion of writing in *pai-hua*, the colloquial language. But his arguments are highly inadequate. In his autobiography Wang says that he had written a work *ki-149 suk9 tsiet118 yi-123* (now lost) »in the hope that *suk1 jen1* (»the vulgar people») the general public would read it and awake»; therefore he had »made straight and perspicuous its language and made an admixture of *suk9 yen;149* »popular words». He repeats later that in the said work he »made perspicuous its purport and made distinctive its language». From this Hu Shih concludes that the lost work was written in *pai-hua* colloquial. And when Wang further says that his *Lun heng* *fuk60 jan86* »again is of the same kind», Hu says that *Lun heng* evidently stands very close to the spoken language of the time. This is indeed to draw conclusions widely exceeding the premisses. These lines in Wang's biography can show no more than that he tried to avoid the much too sophisticated and highbrow phrases and allusions already common among the Han-time writers and keep his language simple; but they certainly cannot prove that *Lun heng* is a document written not in easy *wen-hua* literary language but in *pai-hua* colloquial. We might just as well conclude from his phrases above that he was a champion of »easy *wen-li*» (to use a phrase common among western students of Chinese) rather than of *pai-hua*. Some vague expressions in a biography have little proof value, and we have to examine the extant text itself.

When reading the *Lun heng* we find immediately that it is undoubtedly written in some kind of literary language, just as much as a series of other philosophical writings of the Han era, e. g. the *Ch'un ts'iu fan lu*, the *T'ai huan king*, the *Po hu t'ung*. Every page shows that the text is not a faithful mirror of everyday speech. Above all, this is revealed by Wang's strong predilection for rhythmical rules and parallelism. Take, for instance, the beginning of the chapter *Wu hing* (K. 2): the rhythm is as follows (each stroke here represents a monosyllabic word):
 ----- (6), ----- (6), ----- (6), ----- (8), ----- (8), ---- (4),
 ---- (4), ---- (4), ---- (4), ---- (4), ---- (4), ----- (7), ----- (7),

¹⁾ The entire work has been translated in a meritorious way by Alfred Forke in two volumes 1907 and 1911.

----- (5), ----- (5), ----- (5), ----- (4), ----- (4), etc. This cannot possibly be a picture of Wang's language when he conversed with his fellows. It is a kind of *wen hua*, not real *pai hua*.

But the fundamental question then remains: how does this *wen hua* of Wang's stand in relation to the *pai hua* he talked? Was it simply a difference of style, so that his *wen hua* was to his *pai hua* what literary English around 1800 was to colloquial English in 1800 (theory A)? Or was it a fundamentally different language, with different grammar (auxiliaries, constructions) and vocabulary, in such a case a mere artificial imitation of the *wen hua* of Chou time, this being «the Latin of China» already at the time of Wang Ch'ung (theory B)?

If the latter (theory B) were true, this would mean that the grammar and vocabulary of the *wen hua* of 500–200 B. C. (which at that epoch was a true picture of the colloquial language of the late Chou era), were still maintained by Wang Ch'ung some three centuries later, in spite of the fact that the grammar and vocabulary of the spoken language cannot possibly have remained unaltered, exempted from every gradual and organic evolution during those centuries. If Wang Ch'ung really wrote his *Lun heng* in «China's Latin», the classical Chinese of late Chou time, this would mean that the grammar and to some extent the vocabulary in *Lun heng* are archaizing, diverging from the (to us unknown) colloquial spoken by Wang. He would then indeed have employed the fossilized *Ku wen*, a language «now dead for more than 200 years».

If, on the other hand, the former alternative (theory A) were true, sc. that his *wen hua* in *Lun heng* was to his spoken *pai hua* approximately what literary English in 1800 was to colloquial English, the contrast being merely a difference of style, then this should be observable in the *Lun heng* text; for then, inevitably, the gradual changes in grammar and vocabulary in the spoken language which must unfailingly have taken place in the course of three centuries, must be mirrored in his *Lun heng wen hua*. If this latter is merely a stylistically refined variant of Wang's colloquial language, then it cannot preserve unaltered the grammar and vocabulary of the great Chou writers, the creators of «classical Chinese».

If, then, we first turn our attention to the vocabulary, it is certainly true, as Wang says in his autobiography, that he has made it perspicuous and simple. Indeed, throughout the big work, he regularly operates with words all of which belong to the 4 or 5 thousand commonest words of the language, most of them still current in modern *pai hua*. Rare and difficult characters are very few, and those unusual words which in Chou time crop up *passim* in works like Mencius, Kuo yü, Chuang-tsi are ruthlessly eradicated from the *wen hua* of Wang Ch'ung. On the other hand, it is very difficult to draw any conclusions about words of his which may be innovations, being colloquial words of his own time now incorporated in his *wen hua* but not occurring in pre-Han literature. In fact the pre-Han literature preserved is not sufficiently extensive to allow such conclusions *ex silentio*.

We are better placed for making conclusive tests of the grammar, notably the auxiliaries. But here, too, the investigation is hampered by serious difficulties. Wang Ch'ung often clearly indicates the source of a quotation, or, at least, he clearly says that it is a quotation from a *chuan* (chronicle, record), i. e. some earlier narrative, and then it is easy to set aside and disregard the auxiliaries figuring in the quotation. Wang quotes by titles, for instance, Shī, Shu, Yi, Lūn yü, Meng-tsi, Li ki, Ch'un ts'iu, Tso chuan, Sün-tsi, Han-fei-tsi, Huai-nan-tsi, Shī ki. But just as often he copies passages out of these works without the slightest hint that they are borrowed; and not only out of those but also out of Kuo yü, Lū shī ch'un ts'iu, Chuang-tsi, Ta Tai li etc.¹⁾ Indeed we can clearly observe that he had carefully read and to a large or small extent drawn upon practically all the pre-Han texts which have been preserved to our day. Very likely many passages which appear to be his own are really borrowed from some predecessor, though we have not been able to trace the source. The task is therefore not so simple as that of looking through the Lun heng and recording and systematizing its auxiliaries. Apparent exceptions to the general rules must be examined with a view to the possibility of their belonging to a (not acknowledged) quotation — and they can then often be eliminated.

What we have to do now is obviously to examine whether the system of auxiliaries in Lun heng is the same as that in one or several of the most important Chou-time works which can be suspected of having served as Wang's model or models. If, as might be expected, Wang had imitated the Lun yü and Meng-tsi, for instance, (he seems to have a special predilection for them), he would certainly have followed their pattern in regard to the auxiliaries, in preference to the grammatical usage of his own time (theory B). If, however, the Lun heng evidences a system different from that of all the Chou-time texts, we have proof of Wang's linguistic independence (theory A) and that his *wen hua* is by no means a «dead language»; we are thus enabled to draw some highly interesting conclusions about the colloquial of middle Han time. We shall therefore examine a certain number of auxiliaries, in regard to their occurrence in Lun heng on the one hand, and in 11 pre-Han texts on the other: Lun yü, Meng-tsi, Tso chuan, Kuo yü, T'an Kung (an extensive chapter in Li ki)²⁾, Chuang-tsi, Mo-tsi, Lū shī ch'un ts'iu (minus the Yüe ling), Sün-tsi, Han-fei-tsi, Chan kuo ts'e. And we shall add two Han-time texts which Wang has studied and often quoted, Huai-nan-tsi and Ch'un ts'iu fan lu.

¹⁾ Thus, for instance, the chapter Ch'u pin gives the story of how Wen Wang Ch'ang was preferred by his grandfather, and a pronouncement of the latter is given *verbatim* after Shī ki: Chou pen ki.

²⁾ The T'an Kung is one of the oldest sections of the Li ki. Its grammar shows that it is very closely akin to the Lun yü and is probably contemporaneous with it. No investigator of early Confucianism should disregard the T'an Kung, it is almost as important as Lun yü itself. In my opinion it represents the residue of the traditions preserved by the immediate disciples of Confucius, after selecting the most famous ones to form the Lun yü. Be this as it may, it is written in early Lu dialect, along with the Lun yü and Meng-tsi.

It may seem bold and uncritical to treat a text like the present Chuang-tsi or the present Mo-tsi or the present Tso chuan as a homogeneous and authentic whole, and register the auxiliaries in »Chuang-tsi» etc. I ought, on the one hand, to know that certain chapters are spurious or, in part at least, later interpolations; and I ought to know, on the other hand, that a text like Tso chuan is made up of several earlier texts boiled down together to make a new soup.

The former reproach leaves me quite unconcerned. It is fashionable, among both Chinese and Western scholars, to indicate such and such a chapter in Chuang-tsi or Mo-tsi as »spurious», or such and such a passage as »an interpolation» — it looks very scholarly and critical. But with few exceptions such condemnations are based on flimsy, insufficient and subjective arguments, and it is my firm conviction (after decades of work with pre-Han texts) that in nine cases out of ten such criticisms are unfounded or exaggerated. The principal Chou texts which we possess are, in fact, remarkably good and well preserved, and it will require a much more scholarly and painstaking detailed analysis (especially with linguistic methods) than has hitherto been effected before we can be scientifically justified in rejecting certain chapters or passages as spurious.

The second objection: that a Chou work may have been made up of two or several earlier sources, does not in any way invalidate our investigation here, where it is exclusively a question of what kinds of grammatical patterns from Chou time Wang Ch'ung actually had before his eyes. He read the Tso chuan and he either imitated or did not imitate its grammar, regardless of the earliest history of the Tso chuan text. But I may take the opportunity, here once more, to express my opinion that the beloved game of cutting up Chou texts into supposed »earlier works» is a bad practice. A warning example is Maspero's treatment of the Tso chuan¹⁾, in which he defines this important text as a mosaic of earlier texts (now all unknown!); the impossibility of this theory is evident. A careful reader of the Tso chuan cannot but realize the complete homogeneity of grammar and style throughout this big work, one of the most remarkable in the whole literature of China, so obviously the creation — written *aus einem Guss* — of one great and powerful artist. This is, indeed, no more a patchwork than is Herodotus' history. Like Herodotus, the Tso author had sources upon which he drew. But like his great Greek contemporary, he worked it all out and formulated it into a narrative in his own highly personal way.

In examining Wang Ch'ung's grammar as compared with that of the said eleven pre-Han and two early Han works, we could select a whole series of criteria. In 1926²⁾ I studied the occurrence of certain grammatical words in some pre-Han

¹⁾ La Chine antique, 1927, pp. 592—95, cf. the same author in *Mélanges chinois et bouddhiques* I, Bruxelles 1932, pp. 188 ff.

²⁾ B. Karlgren, On the Authenticity and Nature of the Tso chuan.

texts, but here I will leave aside the questions discussed there of the contrast¹⁾ between *wu* 吾 and *wo* 我, between *yü* 於 and *yü* 于, between *yü* 與 and *ki* 及, between *jo* 若 and *ju* 如, and concentrate upon a series of other *formantia*.

A comparison between the auxiliaries in the said early texts and those in Lun heng will necessitate an estimate of the frequency in the occurrence of such and such an auxiliary in the various texts.

In computing the frequency with which an auxiliary occurs in a text we necessarily have to consider on the one hand how many examples of *x* there is in the text, on the other hand how extensive the text is. Our texts to be examined are of greatly varying length. In a compactly printed edition of the bare text of the Shī san king, Tso chuan occupies 272 pages, Mencius 47, Lun yü 23 and T'an Kung 14. Obviously some 5 examples of an auxiliary *x* in Lunyü is equal to more than 50 examples in Tso chuan. It would seem advisable, then, to make a strictly statistical investigation, employing the whole mathematical technique of ordinary statistical research, but that would, after all, still be fallacious, since the contents vary from text to text, and certain authors have, for instance, a great many interrogative sentences (with finals like *hu*, *ye*, *ü*), whereas other authors very seldom have them. Thus I have thought it preferable to use my own judgment, after counting the number of examples of an *x* in a certain text, to decide whether this number represents a frequent occurrence, a sparing use or merely a few sporadic cases which cannot prove that *x* really belonged to the language of this author. This may seem to leave too much to an arbitrary decision, since in this way 5 examples may in some cases be deemed a regular use and in other cases a sporadic use (to be disregarded), but a commentary will in each case be furnished in my notes below. It will be necessary, however, to sum up the results in a table, and this table will unavoidably be somewhat unfair in so far that it simplifies matters very strongly. In the table I shall employ only three symbols. By 0 I shall designate either a total absence of the auxiliary in question or its occurrence only in a very few, sporadic cases which should be entirely discounted; by 1 I shall indicate a very sparing use of the auxiliary, barely sufficient to warrant its being acknowledged as an allowed element in the language of this text; and under the symbol 2 I shall

¹⁾ A few words may be inserted here about the contrast *wu* : *wo*. I stated in 1926 that *wu* occurs exclusively in the nominative and genitive cases, never in the dative and accusative cases, in which *wo* is the rule. Some scholars have objected that this is not true: there are, in fact, a few examples of *wu* in the accusative. It should be observed, however, that in these exceptions it is always a case of inverted word sequence. The normal sequence is: subject-verb-object, hence *wu t'ing chī* »I hear it« (*wu* nominative), *wang t'ing wo* »the king hears me« (*wo* accusative). But if the verb has a negation, the object has to be placed before the verb: *wu fu chī t'ing* »I do not hear it«, and this should give, in the second example: *wang fu wo t'ing*. But since *wo* here would come to occupy the position before the verb which normally belongs to the subject (*wu*), in consequence of the inversion the *wo* (accusative form) is changed into *wu* (nominative form) *wang fu wu t'ing*. This is a very natural and clear case of *attraction*, and does not in any way invalidate the general rule.

comprise two things: on the one hand a regular use which, though not particularly frequent, still testifies to this auxiliary's being a normal element in the language of this text, on the other hand a very common occurrence or indeed an exceedingly high frequency (hundreds of cases). It is practical to lump all these latter variations in frequency together under the symbol 2, since the purpose is principally to show the auxiliary to be a normal and regular element in this text.

The auxiliaries which offer themselves as suitable criteria in our investigation are quite a considerable series; the selection, however, is not self-evident but calls for a judicious test.

In the *Lun heng* we find a whole array of the current form words of Chou-time texts. There is the *chī* 之 both as genitive and attributive particle, and as personal pronoun in dative and accusative ('him, her, it'). There is the noun-creating particle *che* 者 (*shī*:78 *che* 'the one who dies' [who died] and 'the dying' = 'death, to die'). There are the common demonstrative pronouns *shī* 是 and *ts'ī* 此. There are the consecutive particles *tsek* 則, *nai* 乃 and *tsik* 卽 and the perfective *ki* 既. There is the relative pronoun and adverb *so* 所 (*quem, quam, quod* and *quo*), there is *ts'ī* 自, both reflexive pronoun and preposition («from»). There is the personal pronoun in genitive *k'ī* 其 ('his, her, its, their'), with all its applications in the clausal constructions (*k'ī lai king ye* »at his coming to the capital» = »when he came to the capital» etc.). There are *ju* 如 and *jo* 若 in both their functions ('like, as if' and 'if'), and *kou* 苟 'if'. There is the adverbial suffix *er* 而 in all its varied functions, and there is the adverbial suffix *jan* 然. There is the interrogative pronoun and adverb *ho* 何 ('who, what, how, why'), and the interrogative initial particles *an* 安 and *k'ī* 豈. There is the introductory initial particle *fu* 夫 (second tone). There are the particles of future *tsiang* 將 and *ts'ie* 且. There are the auxiliaries of verbal origin *yi* 以 ('by, with, in order to' etc.), *yung* 用 'with', *yu* 由 'from', *yü* 與 (3rd tone) 'together with' and 'to', *wei* 爲 'for, because of' etc., *yü* 於 'in, at, auprès de' etc., (and *yü* 于, though very rarely), and *suei* 雖 'though'. There are the final particles *ye* 也 (denoting a statement, a judgment), *yi* 已 (a definite result), *yih* 矣 (a subjective opinion), *yen* 焉 (mostly = 於是), *hu* 乎 (interrogative and exclamatory), *tsai* 哉 (exclamatory), *er* 耳 (restrictive). And there are the common negations *put* 不, *fei* 非, *mo* 莫, *weih* 未, *weih ch'ang* 未嘗, *wu* 無. Altogether, at a first reading of the *Lun heng* one gets the impression that it has preserved the whole arsenal of formantia of «classical Chinese» of the last pre-Han centuries and that it faithfully copies the literary language of the great models Confucius and Mencius, Mo-tsi and Sün-tsi etc. But a closer inspection reveals some radical deviations of great interest.

In the following record of the conditions in the said ancient texts it would, of course, be desirable to give detailed lists of all the find places of the various auxiliaries in the texts examined, but this would take up a bulky volume and we can do no more than present briefly the results of our detailed count of all the instances occurring in the texts. For certain works (Tso, Lyü, Meng, Mo, Chuang)

the details can easily be supplied by the Index series of the Harvard-Yenching Institute; for the rest (such as Sün, Hanfei, Lü etc.) the reader will have to accept our figures.

1.

The negation adverb *fut* 弗 has a particular modal value in the Chou literature: it mostly means 'cannot' or 'will not', e. g. *wang*; 96 *fut t'ing* 128 »The king would not listen»; *fut k'ok* 10 »He could not vanquish (him)». This *fut* is exceedingly common in the early literature. We have to give it mark 2 in Meng, T'an, Tso, Kyü, Chuang, Mo, Lü, Hanfei, Ts'e and in Fanlu and Huai. There are, however, two surprising exceptions. In Lyü there are only three instances, which entitle this short text to mark 1, and Sün has only one case, thus mark 0.

Lheng¹⁾ has *fut* in eight passages and it would therefore seem that we should give it mark 1. But most of the cases are due to a direct influence from definite passages in earlier authors, being occasional imitations or allusions. In ch. Yi-wen (K. 20: 11) we find: *fut fuk* 60 *kien*-147 »one did not further see it», this identical phrase recurring in ch. Ki-yao (K. 22: 10), where the whole passage is taken verbatim from Shiki: Liu hou shi kia. Moreover, the same phrase occurs in Hanfei: Shuo-lin, and its sporadic use in Lheng is thus a direct literary loan. In the earlier texts it is exceedingly common to find the phrases *fut neng* 'cannot' and *fut kan*:66 'dare not' (hundreds of cases), and this has caused sporadic imitations in Leng: ch. Pien-hü (K. 4: 14): *fut neng wen*; 169 *ye*; ch. Ting-hien (K. 27: 6): *ok* 61 *ch'i*-133 *ta*-37, *ch'uei* 118 *fut neng*, *shu*-66 *ch'i*-133 *to* 36, *sheng* 24 *huk* 68 *fut neng*; ch. T'an-t'ien (K. 11: 4): *fut kan*:66 *yen*; 149. There remain only four cases of a more independent kind (ch. Shuai-sing, K. 2: 16: *jen* 9 *fut fuk* 60 *fei*; ch. Tsi yi, K. 25: 17: *siu* 9 *hing* 134 *fut tsüet* 120; ch. Po tsang, K. 23: 7: *suei* 172 *siao*:42 *fut ch'u*; 170, - - *suei* 172 *ta*-37 *fut yüü*; ch. Ts'i ki, K. 30: 2: *yik* 8 *fut yü*; 149, - - *yik* 8 *fut fuk* 60 *hien*-170), and in two of these we again find the combination *fut fuk* 60, which characterized our first example (copied after Shi ki). The position of *fut* in the Lheng is therefore so extremely weak that we have to give it mark 0. Against the many hundreds of *put* and *fei*, our four cases of *fut* cannot refute the conclusion that the negation *fut* does not belong to the language of Lheng. In this respect Lheng agrees with Sün, as against all the rest of the earlier texts.

2.

Again, the negation adverb *wut* 勿 is very widely used in the early literature e. g. Lyü 1: 8: *wut tan*-61 *kai*:66 »don't fear to change»; Lyü 14: 7: *neng wut huei*-149 *hu* »can one fail to instruct him?». We give it mark 2 in Lyü, Meng, T'an, Tso, Kyü, Mo, Lü, Hanfei, Fanlu and Huai, and a 1 tending towards 2 in Chuang (17 cases) and Sün (16 cases).

¹⁾ In the following we shall use the abbreviation Lheng for Lun heng.

Lheng has only two stray instances of this *wut* (ch. Ts'i-Meng, K. 10: 17: *yūk66 wut mu:80 shik184 ye*; ch. Tsi-jan, K. 18: 2 *wut fuk 60 yūū chī111*), and we thus have to put down mark 0. Here Lheng breaks away from all precedents.

3.

The final particle *fu* 夫, e. g. Lyü 8: 3: *wu;30 chī111 mien:10 fu* »I know that I shall escape«, has a more limited use. We give it mark 2 in Lyü, T'an and Tso, mark 1 in Chuang (12 ex.), Lü (9 ex.), and mark 0 in Meng (one ex.), Kyü (one ex.), Mo (two ex.), Sün, Hanfei, Ts'e, Fanlu and Huai.

Lheng here conflicts with its favourite sources, Lyü and Tso, and has no final *fu* whatever; thus: 0.

4.

In certain early texts it is a common feature that a sentence has two final particles, e. g. *hu tsai30, ye tsai30, yih tsai30, ye fu, ye hu, yih hu, ye yi:49* or even three, e. g. *ye hu tsai30*. Thus, for instance, Lyü 14: 29: *Sī-154 ye hien;154 hu tsai30* »Si is wise indeed«; Lyü 14: 6: *yu yih fu* »(those) have existed«. This feature is so frequent as to deserve mark 2 in Lyü, Meng, T'an, Tso, Kyü, Chuang, Sün, Ts'e and in Fanlu, whereas we allow a 1 in Mo (9 ex.), Lü (16 ex.), and Huai (6 ex.), and only a 0 in Hanfei (5 ex.). (I have left out of consideration here entirely the phrase *er yi:49 yih* 而已矣, which is common in all texts, even in such as otherwise never or but seldom have double finals; evidently the middle word is here felt to be a full verb, not an auxiliary: »and thereby it is finished« = »and that is all«).

Lheng has only four stray examples (ch. Wen-K'ung, K. 9: 9: *shang9 put wang-(wang;96) ye yi49*; ch. Pie-t'ung, K. 13: 9: *sī:78 jen9 chī t'u;60 ye tsai30*; ch. Tsao-hu, K. 16: 5: *li-30 shou-29 yū kung19 ts'ao;73 ye hu*; ch. Kie-ch'u, K. 25: 9: *ming72 yih tsai30*). In a fifth (ch. Wen-K'ung, K. 9: 16: *put tang102 shī-9 ye tsai30*) the *ye-tsai30* is a mere repetition of the same phrase in a quotation from Confucius a few lines earlier. These four sporadic cases cannot disprove the obvious fact that the Lheng language does not, as a rule, allow two final particles together. We have to record a mark 0. On this point, again, Lheng is in direct contrast with the bulk of the ancient literature.

5.

The final interrogative particle *yeh* 耶 (邪) is far from general in the early literature, but in certain texts it occurs frequently, e. g. Chuang 2: 19: *k'o put ai30 yeh* »is it not lamentable«. This particle may be given mark 2 in Chuang, Mo, Sün, Lü, Ts'e and in Fanlu, and mark 1 in Kyü (9 ex.), Hanfei (12 ex.) and in Huai (12 ex.), but it is lacking, in Lyü, Meng T'an, Tso (one ex.) thus getting mark 0.

Lheng here deviates from its favourite Lyü-Meng-Tso patterns and follows the other set, having some two-score instances of final *yeh*; thus mark 2, e. g. ch. Kan-hü, K. 5: 14: *an40 neng tek yü:173 yeh* »show can one obtain rain», etc.

6.

The final interrogative particle *ü* 與 (歟), e. g. Lyü 1: 10: *k'iu;85 chü ü* »does he ask for it», is of frequent use in many early texts. We have it with mark 2 in Lyü, Meng, T'an, Chuang, Mo, Sün and in Fanlu, with mark 1 in Lü (16 ex.), Ts'e (12 ex.) and in Huai (6 ex.); but it is entirely lacking or nearly so, mark 0, in Tso (two ex.), Kyü (one ex.), Hanfei (one ex.). Observe the interesting fact that this is a point on which Tso diverges from the language of Lyü and Meng.

Lheng has only five instances (ch. Ming-lu, K. 1: 12: *tsi-132 tek chü kwei-154 ü*; ch. K'i-kuai, K. 3: 25: *feng-196 huang;16 chü k'i-84 ü*; ch. Shu-hü, K. 4: 4: *tuk94 wei Kwei-(huei-73) ki115 lip117 ü*; ch. Ts'i Meng, K. 10: 18: *hing;144 put shun-181 ü*; ch. Ch'ao k'i, K. 13: 17: *k'i:151 tsai ch'ang168 sheng100 chü t'u;60 ü*). We might hesitate between a weak mark 1 and a mark 0; but in view of the great number of interrogative clauses ending in *hu* in this huge book, and those two-score ending in *yeh*, it is hardly an exaggeration to say that in spite of the 5 sporadic cases of final *ü*, it does not really belong to the language of the Lheng and therefore we give it mark 0.

7.

The final particle *er:89* 爾 has a more restricted use. It is really frequent only in Fanlu: mark 2, and obtains mark 1 in Lyü (5 ex.), Meng (8 ex.), T'an (3 ex. in this short text), Sün (5 ex.), for instance Lyü 10: 1: *wei;30 kin;149 er:89* »but he was careful». It gets mark 0 in Tso, Kyü, Chuang (4 ex. in this big book), Mo, Lü, Hanfei, Ts'e (one ex.) and Huai (3 ex.).

In Lheng the final *er:89* is entirely lacking, mark 0.

8.

The interrogative pronoun and adverb *hi;37* 奚 is frequent and important in parts of the early literature, e. g. Lyü 7: 19: *ju:85 hi;37 put yüet73* »why do you not say?»; Lyü 13: 3: *tsi tsiang41 hi;37 sien-10* »what will you put in the first place?». This word will have mark 2 in Lyü, Meng, Chuang, Lü, Hanfei, Ts'e, and in Fanlu; and mark 1 in T'an (3 ex. in this short text), Mo (15 ex.), Sün (8 ex.). But it is altogether lacking or nearly so, mark 0, in Tso (4 ex. in this big book), Kyü (6 ex. in this big book) and in Huai (5 ex. in this big book).

In this case Lheng disagrees with Lyü and Meng and agrees with Tso; it has only four examples (ch. Shuai sing, K. 2: 14: *hi;37 huan-61 sing-61 chü put shan-30 tsai30*; ch. Chuang-liu, K. 14: 4: *hi;37 yu;102 tsao:72 chü-133*; ch. Shun-ku, K. 15: 17: *hi;37 ts'ung60 lai9 tsai30*; ch. Sü-sung, K. 20: 4: *hi;37 37 tek ch'uan;9 ch'i;187*). The *hi;37 huan-61* in the first example is a direct loan of this common

formula in the early texts (it occurs e. g. in Chuang, Sün, Lü), and the *hi;37 yu;102* in the second is a formula occurring five times in Lü, a favourite work often quoted by Wang Ch'ung. The 4 stray instances cannot, therefore, refute the fact that *hi;37* does not belong to the language of Lheng; we must give it mark 0.

9.

The interrogative pronoun and adverb *hu;130* 胡 is more restricted in the early texts, yet it plays a considerable part, e. g. Tso: Min 2: *hu;130 k'o shi-61 ye* »how can it be relied upon?», etc. It is most current in Lü, mark 2, but also represented, mark 1, in Tso (10 ex.), Kyü (11 ex.), T'an (3 ex. in this short text), Mo (12 ex.), Chuang (12 ex.), Sün (6 ex. in this fairly short book). It is totally absent or nearly so, mark 0, in Lyü, Meng, Hanfei (4 ex.), Ts'e (5 ex. in this big book), Fanlu (one ex.) and Huai (two ex.).

Lheng has only two stray examples, thus mark 0 (ch. Si-wei, K. 21: 2: *hu;130 neng hai-40 jen9*; ch. Tsi-ki, K. 30: 2: *hu;130 put tsi-132 ch'en;170*); and the second of these is evidently a direct allusion to Ode 265: *hu;130 put tsi-132 t'i-73*; an earlier allusion to this Shī phrase is Kyü: Lu, hia: *hu;130 put tsi-132 an40*.

10.

The interrogative pronoun and adverb *hot73* 曷, e. g. Sün: Jung ju: *T'ang85 Wu:77 tsai shang-1 hot73 yik108* »T'ang and Wu being at the top, what is the use of it?», is very curious in that it is common in Shu and Shī but totally absent or nearly so in the majority of middle and late Chou texts. Thus it gets mark 0 in Lyü, Meng, T'an (two ex.), Tso (one ex.), Kyü, Chuang (two ex.), Mo, Hanfei, Ts'e (5 ex.), and in the Han texts Fanlu and Huai (5 ex.). It gets mark 1 in Lü (12 ex.) and is really common only in Sün, mark 2. But it should be added that in the phrase *hot wei* 曷 爲 it occurs in hundreds of cases in Kungyang chuan.

Lheng here follows the lead of the middle-Chou texts, getting mark 0, since it has only 5 stray examples (ch. Ki-yen, last line: *hot73 ch'ang;30 wu - - yen-187 hu*; ch. Ta-ning, K. 11: 19: *hot73 wei tuk94 yi ts'ing;61 tsi-132 pai-66*; *ibid.*: *hot73 wei ch'ang;50 yu sie;163 ning-9 chi ch'en;131*; *ibid.*: *hot73 wei huei;79 chi*; ch. Pu-shi, K. 20: 9: *hot73 wei feng;162 put kit30*). Out of these 5, no less than 4 have the phr. *hot73 wei* just-mentioned, which, besides being frequent in Kungyang, represents 7 out of the 12 cases in Lü, and the four sporadic cases of it in Lheng are obviously occasional imitations of Kungyang and Lü, both of which Wang Ch'ung studied assiduously.

11.

The interrogative adverb *yen* 焉 'how' is very frequent in the early texts, e. g. Lyü 4: 1: *yen tek chi-(chi111)* »how can he be wise?». We give it mark 2 in Lyü, Tso, Kyü, Mo, Hanfei and Ts'e, mark 1 in Meng (11 ex.), Lü (11 ex.), Huai (10 ex.),

whereas it gets mark 0 in Chuang (only 6 ex. in this very long text), T'an (two ex.), Sün (one ex.) and in Fanlu.

In Lheng we have 6 examples (ch. Ch'ao-k'i, last line: *yen meng*140 *cheng*60; ch. Chuang-liu, last line: *yen kan*:66 *wang*-74 *kuan*40; ch. P'ien-tung, K. 15: 1: *wut*93 *yen neng tung*-19 *t'ien*37; ch. Tsi-jan, K. 18: 1: *tsi*-132 *jan yen tsai*; ch. Chi-shi K. 26: 17: *yen k'o h'uek*39; ch. Tsi-ki, K. 30: 8: *yen kan*:66 *k'ien*:149 *yit*1 *tsi*-39). The phrases *yen kan*:66, *yen neng*, *yen k'o* are common in the earlier literature, and three out of the six cases may thus be occasional repetitions of ready-made phrases. The remaining three cases cannot prevent our concluding that *yen* 'how' does not belong to the language of the Lheng, and giving it mark 0.

12.

The interrogative adverb *wu*61 惡 'how', e. g. Meng 1A: 6: *pi*:60 *wu*61 *chi*111 *chi* »how do they know it?«, is particularly common — mark 2 — in Meng and Chuang, allowed but not frequent, mark 1, in Mo (15 ex.), T'an (3 ex. in this short text), Lü (14 ex.) and Sün (13 ex.), but entirely lacking or nearly so, mark 0, in Lyü (one ex.; observe that this is a point on which Lyü and Meng differ), Tso (5 ex. in this enormous text), Kyü, Hanfei, Ts'e (3 ex.), Fanlu, Huai.

Lheng has only two stray instances (ch. Ts'i-Meng, K. 10: 17: *wu*61 *neng lien*53; *ibid.*: *wu*61 *neng wei k'o hu*), which means mark 0.

13.

One of the most important auxiliaries is the modal particle *k'i* 其 (to be distinguished from the pronoun *k'i* 其 'his, her, its, their'), which expresses a subjective opinion, e. g. Lyü 3: 23: *Y'uek*75 *k'i k'o chi*111 *ye* »the music can be known»; Lyü 6: 24: *k'i ts'ung*:60 *chi ye* »he will probably follow it»; a wish (optative), e. g. Tso: Min 2: *kün*30 *k'i t'u*:31 *chi* »may you consider it»; or a question, e. g. Lyü 6: 6: *Shan*46 *ch'uan*47 *k'i she*:135 *chu* »will (the spirits of) mountains and rivers put it aside?» (in the common phrase *k'i shuei*:149 »who» it seems doubtful whether *k'i* is interrogative or a partitive genitive: *deren welcher*, which of them; probably the latter). This modal particle is extremely common, mark 2, in Lyü, T'an, Tso, Kyü, Chuang, Lü, Hanfei, Ts'e, and gets mark 1 in Sün (6 ex. in this not very extensive book) and Huai (10 ex.), but it is lacking, mark 0, in Meng (10 ex. in Meng are all quotations) — an interesting divergence between Meng and Lyü — in Mo (only 4 ex. in this long text) and in Fanlu.

Lheng has 12 examples (ch. Shuai-sing, K. 2: 12; ch. Yi-hü, K. 5: 1; ch. Tao-hü, K. 7: 13; ch. Fei-Han, K. 10: 3; ch. Ts'i-Meng, K. 10: 18; ch. Liang-chi, K. 12: 10; ch. Kiang-juei, K. 16: 21; ch. Lun-si, K. 20: 13; *ibid.* K. 20: 14; ch. Kie ch'u, K. 25: 7; ch. Tsi-yi, K. 25: 17; ch. An-shu, K. 29: 5). It would thus seem proper to give it mark 1. But of the 12 ex. there are 5 that are identical: *k'i ho yik*108 *tsai*30 »what would be the use of it?«, making really but one, and one more ex. (k. 16: 21) is a standing phrase: *k'i ts'i chi wei*-149 *ye* very common in early texts and taken

over from them. Thus we can hardly reckon with more than 6 cases in this very big book, which means that the modal *k'i* does not properly belong to the language of Lheng; we give it mark 0.

14.

There is a curious use of the adverb *er* 而 after the verb *tek* 得 'can', e. g. Lyü 12: 11: *wu*;30 *tek er shik*184 *chu* »can I eat it»; Meng 4 A: 13: *min* 83 *put k'o tek er ch'i*-85 *ye* »the people cannot be governed». This is particularly common, mark 2, in Mo (34 ex.) and in Fanlu (16 ex. in this fairly short text), and well attested though not frequent, mark 1, in Lyü (7 ex.), Meng (8 ex.), Chuang (17 ex.), Lü (9 ex.), Sün (13 ex.), Ts'e (7 ex.), Huai (14 ex.). It is altogether lacking or nearly so, mark 0, in T'an, Tso (3 ex.), Kyü (4 ex.), Hanfei (2 ex.).

Lheng has no examples, thus mark 0 (but, curiously, three stray examples of *neng er* 能 而 in the first lines of ch. Luan-lung).

15.

The preposition *hu* 乎, synonymous with *yü* 於, e. g. Lyü 7: 24: *wu*;30 *wu yin*:170 *hu er*:89 »I have nothing which I conceal from you», plays a prominent part in the early texts. It takes mark 2 in Lyü, Meng, Chuang, Mo, Lü, Sün, Hanfei, Ts'e, Fanlu and Huai, but mark 0 in T'an (two ex.), Tso (one ex.), Kyü — we do not count, then, the phr. *yü shi hu* »then, thereupon», very common in Tso and Kyü, with enclitic *hu* combined with an ordinary *yü*.

Lheng has only four examples, thus mark 0 (ch. Lei-hü, K. 6: 16: *k'ou*:30 *chok*123 *hu t'i*:188; ch. Hiao-li, K. 13: 14: *jup*11 *hu tung*75 *hai*:85; ch. Shun ku, K. 15: 15: *put kai*:66 *hu cheng*-66; ch. Ts'i-ki, K. 30: 2: *chung*-109 *huei*-73 *hu tso*-32). Here Lheng follows Tso and Kyü against the whole array of the other early texts.

16.

The pronoun *sī* 斯 'this', e. g. Lyü 6: 10: *sī jen*9 *ye er yu sī tsit*104 *ye* »that this man should have this sickness», is very important in certain early texts. We find it very common, mark 2, in Lyü, Meng, T'an, but altogether lacking or nearly so in all the rest: mark 0 in Tso, Kyü, Chuang (one ex.), Mo, Lü, Sün (two ex.), Hanfei (one ex.), Ts'e, Fanlu, Huai (one ex.).

Lheng in this respect follows the Lu dialect texts: it gets mark 2, having no less than 31 cases, e. g. ch. Ku siang, K. 3: 5: *sī ship*24 *er*-7 *sheng*-128 *che* »these twelve sages», etc.

17.

The same word *sī* 斯, reduced to a particle ('this, thus > then'), e. g. Lyü 7: 30: *wo*:62 *yük*76 *jen*9:7 *sī jen*9:7 *ch'i*-133 *yih* »If I wish for benevolence, then benevolence arrives», is likewise an important grammatical word. We find it frequently,

mark 2, in Lyü, Meng, T'an, and to a smaller extent, mark 1, in Huai (10 ex.), but it is entirely absent or nearly so, mark 0, in Tso (5 ex.), Kyü, Chuang (3 ex.), Mo (one ex.), Lü (one ex.), Sün (one ex.), Hanfei, Ts'e, and in Fanlu.

In Lheng this *sī* is entirely absent, mark 0. There is only one stray ex. (ch. Tsi-ki, K. 10: 3): *sī k'o yih* »then it will do», but this is a direct imitation of this phrase in Lyü and Meng.

18.

The pronoun and adverb *tsi140* 茲 'this, now, here' which is very common in the Shu and of which there are a dozen examples in the Shī, becomes rare in the Confucian era and later. It is really frequent, mark 2, only in Tso, but must be given mark 0 in all the rest: Lyü (one ex.), Meng (4 ex.), T'an, Kyü (3 ex.), Chuang, Mo (two ex.), Lü (one ex.), Sün, Hanfei, Ts'e (3 ex.), Fanlu, Huai.

Lheng has only one isolated example (ch. Yen-fu, K. 19: 13: *yü tsi140 wei si-31*), thus mark 0.

19.

There is a common formula: A *chī wei-149* B (A 之謂 B), in which it seems doubtful whether *chī* is in the nominative: »A, that is called B» or in the accusative: »A, that one calls B», e. g. Tso: Hi 28: *ting-40 jen9 chī wei-149 li:113* »to settle people that is called propriety». It plays an important part in the early literature (we leave aside here the similar phr. *ts'ī chī wei-149 ye* 此之謂也, in which there is no second term after the *wei-149*). It is particularly common, mark 2, in Meng, Chuang, Sün, Hanfei and Fanlu, and less so, mark 1, in Tso (13 ex.), Kyü (17 ex.), T'an (5 ex. in this short text) and Huai (15 ex.). But it gets mark 0 in Lyü, Mo (4 ex. in this long text), Lü (3 ex.) and Ts'e (4 ex.).

Lheng has no examples at all of this classical construction, thus mark 0.

20.

A peculiar and very important use of the particles *ye che* 也者 is their rôle of indicating the subject in a definition, or generally a subject placed in an emphatic position, e. g. Meng 5B: 3: *yu:29 ye che, yu:29 k'i tek60 ye* »friendship — that is to be friendly towards (the other's) virtue»; Lyü 1: 2: *hiao-39 ti-57 ye che, k'i wei jen9:7 chī pen:75 ü* »filial piety and fraternal submission — are they not the root of benevolence?». This construction with *ye che* is common, mark 2, in T'an (9 ex. in this short text), Chuang, Lü, Sün, Hanfei, and occurs, though but rarely, mark 1, in Lyü (3 ex. in this short text), Meng (8 ex.), Kyü (7 ex.) Mo (6 ex.) and Fanlu (6 ex.); but it is absent or nearly so, mark 0, in Tso (one ex.), Ts'e and Huai (one ex.).

In Lheng it is entirely unknown, mark 0.

21.

The contraction of *chī hu* 之乎 (archaic **ʔiəg-g'o*) into *chu* 諸 (arch. **ʔio*) is very common in some early texts, both when *hu* is a preposition (synon. with *yü* 於) and when it is an interrogative or exclamatory final, e. g. Lyü 15: 21: *kün*³⁰ *tsi* *k'iu*;85 *chu* *ki*:49 »the noble man seeks it within himself»; Meng 2B: 13: *wen*;169 *chu* *fu* *tsi* »I have heard it from the master»; Lün 6: 6: *shan*⁴⁶ *ch'uan*⁴⁷ *k'i* *she*:135 *chu* »will (the spirits of) mountains and rivers put it aside?». This is common, mark 2, in Lyü, Meng, T'an, Tso, Kyü, and in Fanlu and Huai; it is less common, mark 1, in Chuang (15 ex.), Mo (15 ex.), Lü (14 ex.), and it is lacking or nearly so, mark 0, in Sün (3 ex.), Hanfei (one ex.) and Ts'e (3 ex.).

In Lheng it is entirely unknown, mark 0.

22.

We have studied above the curious phenomenon of an enclitic *ye* 也 on Nomina Propria, when occurring in Oratio Recta (i. e. colloquial). We found it, with mark 2, in Lyü, T'an, Tso, Kyü, and, with mark 1, in Chuang (10 ex.), Lü (9 ex.), Ts'e (8 ex.), but it is entirely lacking or nearly so, mark 0, in Meng (3 ex. only), Mo (one ex.), Sün, Hanfei (two ex.), Fanlu and Huai.

Lheng has no instances, mark 0.

23.

The word *tsai* 在 is common in early texts as a verb, but in modern colloquial it has been reduced to a preposition, and is then mostly (though far from always) combined with a postposition, derived from a noun, e. g. *fang*-66 *tsai* *chok*-*tsi* *shang*-1 »put it on top of the table». In the formula *tsai x shang* (*hia*, *wai*, *nei*, *kien*, *li* etc.) *tsai* is not necessarily always a preposition, it may just as well be the verb: *wang*;96 *tsai* *ch'en*;131 *shang*-1 »The king is above the subjects»; but it is merely a preposition when the clause has another word as finite verb, as in our first example. Now, in phrases like Meng 1A: 2: *wang*;96 *lip*¹¹⁷ *yü* *chao*:85 *shang*-1 »The king was standing (above=) at the side of a pond», the preposition is regularly *yü* 於 in the early texts, never *tsai*. But in Lheng the reduction of *tsai* into a preposition in such cases has already taken place, so that it has here adopted the character of modern Mandarin. There are, in effect, quite a large number of examples of the formula *tsai x shang*-1 »on x» etc., e. g. ch. Ku-siang, k. 3: 8: *kü*:134 *tsai* *pen*:75 *ch'ao*;74 »he was promoted in the present court»; ch. Tao-hü, k. 7: 19: *ju* *ts'i*-18 *ts'in*;115 *wang*;96 *tsai* *lü*¹⁶⁹ *chung*² »if one had stabbed the king of Ts'in in the village»; ch. Ju-tseng, k. 8: 9: *Chou*³⁰ *ting*:206 *wang*;8 *tsai* *Si*-85 *shuei*:85 *chung*² »the tripods of Chou disappeared in the Si river». Other instances are: Ibid. *kuei*-154 *tsai* *kung*¹² *k'ing*²⁶ *ch'i* *shang*-1; ch. Feng yü, k. 1: 1: *yü*-162 *tsai* *chung*-109 *shang*-1; ch. Tao-hü k. 7: 12: *yi* *wei* *hüet*¹⁴³ *mok*¹³⁰ *tsai* *hing*;59 *t'i*:188 *ch'i* *chung*²; Ibid. *yin*:170 *tsai* *shan*¹⁴⁶ *kuk*¹⁵⁰ *kien*¹⁶⁹; ch. Yü-tseng, k. 7: 16: *tso*-32 *tsai* *shen*⁸⁵ *shit*⁴⁰ *ch'i* *chung*²; ch. Yi-tseng, k. 8: 15: *tsai*-159 *tsai* *king*¹²⁰ *yi*-140 *ch'i* *shang*-1;

ch. Wen K'ung, k. 9: 6: *liet18 tsai Si-154 shang-1*; and further ex. k. 12: 10, k. 13: 4; k. 14: 1; k. 14: 3; k. 14: 4; k. 14: 13; k. 15: 3; k. 15: 5; k. 16: 20; k. 20: 3; k. 20: 5; k. 20: 7; k. 25: 6; k. 24: 16; k. 26: 15; k. 27: 11; k. 27: 12; k. 28: 2; k. 30: 4. Thus *tsai* as a preposition is well attested, mark 2, and on this point Lheng introduces a remarkable innovation.

24.

The two particles *er* 而 (**n̄iəg*) and *nai* 乃 (**nəg*) are in many respects similar in function, sometimes directly synonymous, and they are two aspects of one and the same word stem. It is, then, a very curious fact that they are sometimes combined into a binome: *er-nai*, e. g. Hanfei: Ts'un Han: *er nai yung-101 ch'en; 131 Si69 chī ki-149 wan:72 yih* »then it is too late to use you servant Si's plan«. This binome is quite unknown in the bulk of the early literature (mark 0 in Lyü, Meng, Tso, Kyü, T'an, Chuang [one ex.], Mo, Sün, Lü [one ex.] and in Fanlu). It still gets the mark 0 (4 ex. only) in Hanfei, and in Ts'e (3 ex.) but mark 1 (9 ex.) in Huai.

Lheng here agrees with Huai. It likewise has 9 examples, thus mark 1, e. g. ch. Kan hü, k. 5: 16: *fei shī:38 Yik108 tsok9 tsing;7 er nai teng105* »it was not first when Yik made a well that they ascended« (other ex.: k. 3: 7; k. 3: 12; k. 7: 12; k. 15: 1; k. 15: 13; k. 16: 17; k. 18: 7; k. 24: 15).

25.

An interesting innovation in Lheng is the use of *kia:9 ling-9* 假令 as a conjunction: »supposing, if«, e. g. ch. Ou-huei, k. 3: 4: *kia:9 ling-9 yu ming-30 hiung17 chī jen9* »if there is a man with an unlucky fate«. This feature is unknown in all the earlier texts, but Lheng has no less than 29 ex., thus mark 2 (k. 2: 10; k. 3: 24; k. 11: 5, 14, 15, 23; k. 15: 8 [bis], 9, 16, 17; k. 16: 12; k. 17: 9; k. 22: 13, 14; k. 23: 14, 15 [bis], 17; k. 24: 2 [bis], 5, 14, 16, 18; k. 25: 4; k. 28: 13).

26.

Another important innovation in Lheng is the use of *nai-126* 耐 (Arch. **nəg*) in the sense of the cognate word *neng* 能 (Arch. **nəng*), e. g. ch. Ming-lu, k. 1: 11: *jen9 put nai-126 shen:40* »man cannot understand it«; ch. Wu-hing, k. 2: 11: *t'ien37 an40 nai-126 tseng32 kien:85 jen9 chī nien51* »how can Heaven augment or reduce man's years?«. Besides these two, there are 16 more instances (k. 2: 11, 14; k. 11: 23, 24; k. 13: 13; k. 15: 7, 8 [ter], 9 [ter], 13, 17; k. 16: 6; k. 17: 13 [ter]), and we get a strong case of mark 1 (tending towards a 2).

27.

There is, finally, a most curious innovation in the language of Lheng, a construction entirely unknown in earlier texts. In questions propounding two alternatives (type: »is it a man or an animal?«), Lheng ends the first by an interrogative

particle, *hu* 乎 or *yeh* 邪, and the second by the stating particle *ye* 也, which seems exceedingly strange. And yet it is quite common, mark 2, there being no less than 28 instances in the Lheng, e. g. ch. Tao-hü, k. 7: 1: *Huang:201 ti-50 che ... hao-141 hu 乎, shi-149 ye 也* »Is Huang-ti a cognomen or a posthumous name?»; ch. Lei hü, k. 6: 16: *t'ien37 shen;113 yeh 邪, ts'ang140 ts'ang140 ch'i t'ien37 ye 也* »is it the Spirit of Heaven, or is it the blue Heaven (itself)»; ch. Wen K'ung, k. 9: 11: *fu jen9 fu-40 kuei-154 tsai t'ien37 ming-30 hu 乎, tsai jen9 ch'i111 ye 也* »people's riches and honours, are they due to Heaven's grant, or are they due to man's wisdom?»; ch. Ta-ning, k. 11: 25: *ta-37 ning-9 yi-72 ch'i111 hu 乎. siao:42 ning-9 yi-72 ch'i111 ye 也* »are the great impostors easy to recognize or are the small impostors easy to recognize?»; ch. Sie-tuan, k. 12: 13: *Lien;162 shan46 hu 乎, Kuei77 tsang-140 Chou30 yik72 ye 也* »(What Confucius created) was it the (book) Lien shan or (the books) Kuei tsang and Chou yi?»; ch. Cheng-shuo, k. 38: 6: *Fang70 kin9 Chou30 li:113 yeh 邪, Hia-35 Yin79 ye 也* »the present one, is it Chou's ritual or is it Hia's or Yin's?». Further examples of this highly remarkable construction we find in: k. 4: 17; k. 7: 9; k. 9: 4, 10, 11, 12 (bis); k. 10: 8, 14; k. 11: 1, 13, 23; k. 12: 13, k. 14: 12; k. 18: 10; 11; k. 21: 6, k. 25: 2, 3, 13; k. 28: 5; k. 29: 2. In this case, Lheng is awarded mark 2.

The results of this investigation are summed up in the table below; as already stated, the figures have to be taken *cum grano salis*, since in some cases it is difficult to judge whether a 0 or a 1 best represents the actual occurrence of the word or phrase in question. On the other hand, one or other of the texts examined need not necessarily be homogeneous, in so far that it may contain unacknowledged borrowings from earlier works (perhaps now lost); a column here does not therefore necessarily illustrate, with complete accuracy, the use of auxiliaries by the author in question; as already discussed above, there is, in this respect, a certain margin of possible error. But as far as it goes, the survey clearly reveals some general tendencies. If these reservations are borne in mind, the table is instructive. It shows two principal facts.

A. There is a surprising variation in the sets of auxiliaries used by the Chou-time authors examined; no two of them are exactly alike in this respect. At first sight veritable chaos seems to reign, but a closer inspection allows us to discern at least some tendencies to groupings. A few examples:

The group Lyü-Meng-T'an unites, in contrast to all the other texts, in employing the demonstrative pronoun *sī* 斯 'this', as well as the particle *sī* 斯 'then'.

The same group Lyü-Meng-T'an likewise unites, unlike nearly all the other texts, in employing the final *er* 爾; besides those three, only Sün has a limited use of this particle.

The Lyü-Meng-T'an group combines with a Chuang-Mo-Sün-Lü group in using final *ü* 與 (and here Ts'e follows them but not Hanfei), and likewise in using the

interrogative *hi* 奚 (here both Ts'e and Hanfei follow them) — as against the Tso-Kyü group, which refuses those auxiliaries.

The case of interrogative *wu61* 惡 is similar. Here Meng-T'an go together with Chuang-Mo-Sün-Lü in employing it, in contrast to Tso-Kyü, which refuse it. In this case Lyü breaks away with mark 0 (with only one stray example of *wu61*), but in view of the shortness of this text and the comparatively restricted use of this auxiliary in all texts, that lacuna might be accidental.

The same Lyü-Meng-T'an group goes together with the same Chuang-Mo-Sün-Lü group (here followed by Hanfei) in employing *ye che* 也者, but here not in contrast to Tso-Kyü but to Tso alone, Kyü following the former groups. This is one of the points on which Tso and Kyü, otherwise closely kindred, disagree.

The second important example of this disagreement is the final *yeh* 邪. Here the Lyü-Meng-T'an group goes together with Tso in refusing it, but Kyü follows the Chuang-Mo-Sün-Lü group (here followed by Hanfei and Ts'e) in using it.

T'an, however, does not always follow Lyü-Meng; it sometimes goes with Tso-Kyü against them. Thus, for instance, we have Lyü-Meng agreeing with the Chuang-Mo-Sün-Lü group (here again followed by Hanfei and Ts'e) in using the preposition *hu* 乎, in contrast to T'an-Tso-Kyü, which refuse it. In quite a similar way, Lyü-Meng agree with Chuang-Mo-Sün-Lü in using *tek er* 得而, as against T'an-Tso-Kyü, which refuse it. On the other hand, Lyü-Meng refuse the auxiliary *hu* 胡, in contrast to the T'an-Tso-Kyü group and also to the Chuang-Mo-Sün-Lü group, which all use it.

Again, there are instances of Lyü and T'an following each other but Meng breaking away, thus showing that, though the three on the whole stand very close to each other, there were still variations inside this dialect group. We have such cases in final *fu* 夫 which is common in Lyü and T'an, as also in Tso, but lacking in Meng (and but sparingly used in two other texts); we have it in *X ye*, which is common in Lyü-T'an and Tso-Kyü (for the rest seldom used, in only two texts) but missing in Meng; and we have it, above all, in the important modal *k'i* 其, which is common in Lyü-T'an and also in Tso-Kyü (and several other texts) but missing in Meng.

A striking similarity between the Lyü-Meng-T'an group and the Tso-Kyü group is the frequent use of the contraction form *chu* 諸; outside those groups it occurs but sparingly, and only in three other texts. Possibly there is also a greater accordance between those two groups than the table reveals in regard to *yen* 焉, which is used in Lyü-Meng and in Tso-Kyü; the 0 in T'an (two stray examples only) may be due to the shortness of this text. In regard to this auxiliary, the other texts show strong variations.

A remarkable phenomenon is the boldness with which some texts go their own way, against all the others, in regard to certain auxiliaries. Thus Tso employs the *tsi140* 茲 (so common in Shu and Shī) but none of all the others do; and Tso likewise rejects the otherwise common *ye che* 也者, in this respect followed only by Ts'e; Sün, alone of all the Chou texts, refuses the negation *fut* 弗, and it has made

frequent use of *hot* 曷 (so common in Shu and Shī), which for the rest occurs only sparingly in Lü and nowhere else; Hanfei alone rejects the double finals (type *hu tsai*) common or at least passable in all the rest.

If we turn to the two early-Han texts, Fanlu and Huai, we find that they do not follow the pattern of any special Chou text: each of them has its particular set of auxiliaries, and occasionally they offer some curious feature. Thus, for instance, Fanlu suddenly becomes prolific in the use of final *er*:89 爾, so rare in Chou texts (a limited use in the Lyü-Meng-T'an group and in Sün); and both Fanlu and Huai make a frequent use of *chu* 諸, which, as we have seen, was typical of the Lyü-Meng-T'an group and the Tso-Kyü group, but was otherwise only rarely used in three other texts.

The fundamentally important conclusion to be drawn from our table is, however, this: The early authors in Chou time did not achieve a normalized »high Chinese« literary language, with one and the same grammatical system in all literary texts; not even in the 3rd c. B. C., when the literary activity was very high, nor in early Han time, did the writers prefer a standard *wen hua* system to a *wen hua* based on their own spoken dialects: if an author did not have *sī* 斯 'this' or *hu* 乎 'in, at' in his own colloquial, he consequently rejected it in his written language, though he was well aware of their existence and use from the study of authoritative texts like the Lunyü. Thus all through this long sequence of centuries the literary language kept in constant touch with and was strongly influenced by the various spoken dialects in the China of that era. Its *wen hua* was not yet fixed in regard to its grammatical garb, it was not yet a »classical Latin« of China.

B. A second striking fact revealed by our tabled summary of the preceding investigation is the extreme independence of Wang Ch'ung in his Lun-heng. He does not endeavour in the slightest way to imitate the *wen hua* of the great Chou authors. The entire set of their grammatical instruments, like 1. *fut*, 2. *wut*, 3. *fu*, 4. double finals, 6. *ü*, 7. final *er*:89, 8. *hi*:87, 9. *hu*:130, 10. *hot*:73, 11. *yen* interrogative, 12. *wu*:61, 13. modal *k'i*, 14. *tek* *er*, 15. *hu* as preposition, 17. *sī*='then', 18. *tsi*:140, 19. construction A *chī wei*-149 B, 20. *ye* *che*, 21. contraction form *chu*, 22. *X ye* — all of them he constantly has in his book in quotations (acknowledged or unacknowledged) but not, as a rule, in his own exposition: there he coolly rejects them all (having only a few stray examples as direct allusions to or imitations of ready-made phrases in the sacred books). Is this due to a desire on his part to reduce the number of auxiliaries in his text, making it more terse? No, for, as described above, his book teems with other auxiliaries identical with such in the Chou texts. Or is it due to a wish to simplify by selecting only one of several words which are approximately synonymous? He might then, out of five negation words, *put* 不, *fut* 弗, *wut* 勿, *fei* 非, *mok* 莫 have rejected two: *put* and *wut*, and limited himself to the three: *put*, *fei*, *mok*; and he might have standardized the interrogative *ho* 何, in order to get rid of *hi*:87,

hu;130, *hot*73. But this is not true either, for why should he then use both *tsek* 則 and *tsik* 卽, both *jok* 若 and *ju* 如, both *er* 而 and *nai* 乃 etc.? No, the obvious truth is that he preserves and employs, out of the arsenal of auxiliaries and pronouns occurring in Chou and early Han texts, such as were still familiar to him in his own spoken language, and refrains from employing those that had become obsolete in his colloquial. In other words, he formed his *wen hua*, his literary language, in close adherence to his own spoken language, and the former is to the latter approximately what Jane Austen's literary language was to her colloquial. Our »theory A« above has been amply confirmed.

It is, then, extremely interesting and valuable to obtain, through the *Lun heng*, proof that in at least one version of the colloquial in middle-Han time, i. e. the language spoken by Wang Ch'ung, a whole series of grammatical words which had earlier played a prominent part in the language of Chou and early Han had become obsolete; and, on the other hand, to get confirmation in this way that the other long series of grammatical words quoted on p. 119 above, were used in the *Lun heng*, not as literary relicts from bygone ages but as living elements in the spoken language of middle Han.

If Wang Ch'ung was thus quite radical, and deviated very decidedly on a long series of important grammatical points from the patterns he had before his eyes in the various Chou-time texts which he either admired or criticized, there were other authors in middle Han time who, on the contrary, tried faithfully to imitate the authoritative models. In our table we have added one text by such an author: the *Fa yen* by Yang Hiung. The text is fairly short, and the figures will therefore be lower all round than in the *Lun heng*. Mark 1 is given in the table for *n:o* 2, the negation *wut* (here with some hesitation, since there are only three examples, which in a longer text would have been disregarded: 0); for 3, the final *fu* (8 ex.); for 5, the final *yeh* (6 ex.); for 7, final *er*:89 (6 ex.); for 10, *hot*73 (7 ex.); for 12, *wu*61 (9 ex.); for 14, *tek er* (5 ex.); for 16, *si* (7 ex.). And mark 0 has been given for *n:o* 18, *tsi*140 (two ex.).

A glance at the column in the table suffices to make us realize that it is the ancient Lu dialect texts which in the main have served as model for Yang (observe that in the first chapter he says that »after the pattern of *Lun-yü*« he has called his book »*Fa-yen*«). Thus, for instance, he employs *si*= 'this' and *si*= 'then', which as we have seen, was a special feature of the Lu-dialect texts, in contrast to all the others. His only more remarkable deviation from the language of the *Lyü-Meng-T'an* group is, on the one hand, the absence of *fut* 弗 and the extreme rarity of *wut* 勿, and, on the other hand, a certain (though restricted) use of final *yeh* 邪 and of *hot*73 曷 — in all these parts he has evidently been strongly influenced by the Confucian paragon *Sün-tsi*. We may take it for absolutely certain that the system of auxiliaries in the *Lyü-Meng-T'an* group could not have lived on and been preserved almost intact down to a middle-Han dialect; *Fa-yen* does not, like *Lun heng*, represent the spoken language of Yang Hiung (being a merely

stylistically refined variant of it), but it is a purposeful imitation of the language of the great Lu-dialect authors in the Chou era (with some modifications in the wake of the foremost exegete, Sün-tsi); to the Fa yen we may truly apply what was said under »theory B» above: to Yang Hiung, the ancient language was »China's latin», which he made his literary medium, disregarding his own current colloquial language.

Wang Ch'ung and Yang Hiung are two typical antipodes: Wang wrote in a refined variant of the spoken language of his time; Yang wrote in the (to him »classical») language of the Confucian masters, in his time a dead language.¹⁾

	Lyü	Meng	T'an	Tso	Kyü	Chuang	Mo	Sün	Lü	Hanfei	Ts'e	Fanlu	Huai	Lheng	Fayen
1. 弗	1	2	2	2	2	2	2	0	2	2	2	2	2	0	0
2. 勿	2	2	2	2	2	1	2	1	2	2	2	2	2	0	1 (0)
3. . . . 夫	2	0	2	2	0	1	0	0	1	0	0	0	0	0	1
4. 乎哉	2	2	2	2	2	2	1	2	1	0	2	2	1	0	2
5. 耶邪	0	0	0	0	1	2	2	2	2	1	2	2	1	2	1
6. 與歟	2	2	2	0	0	2	2	2	1	0	1	2	1	0	2
7. . . . 爾	1	1	1	0	0	0	0	1	0	0	0	2	0	0	1
8. 奚	2	2	1	0	0	2	1	1	2	2	2	2	0	0	2
9. 胡	0	0	1	1	1	1	1	1	2	0	0	0	0	0	0
10. 曷	0	0	0	0	0	0	0	2	1	0	0	0	0	0	1
11. 焉?	2	1	0	2	2	0	2	0	1	2	2	0	1	0	2
12. 惡?	0	2	1	0	0	2	1	1	1	0	0	0	0	0	1
13. 其 mod.	2	0	2	2	2	2	0	1	2	2	2	0	1	0	2
14. 得而	1	1	0	0	0	1	2	1	1	0	1	2	1	0	1
15. 乎 = 於	2	2	0	0	0	2	2	2	2	2	2	2	2	0	2
16. 斯 = 此	2	2	2	0	0	0	0	0	0	0	0	0	0	2	1
17. 斯 = 則	2	2	2	0	0	0	0	0	0	0	0	0	1	0	2
18. 茲	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
19. a 之謂 b	0	2	1	1	1	2	0	2	0	2	0	2	1	0	2
20. 也者	1	1	2	0	1	2	1	2	2	2	0	1	0	0	2
21. 諸 = 之乎	2	2	2	2	2	1	1	0	1	0	0	2	2	0	2
22. X 也	2	0	2	2	2	1	0	0	1	0	1	0	0	0	0
23. 在上	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
24. 而乃	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
25. 假令	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
26. 耐	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
27. . . . 乎 也	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0

¹⁾ The indications of *küan* (K) and pages in Lun-heng refer to the punctuated edition of the Sao ye shan fang company, Shanghai, 1925.

THE ALTAI BEFORE THE TURKS

BY

KARL JETTMAR

The excavations which were undertaken in the Altai towards the end of the nineteen-twenties, threw a strong light on ancient times in Central Asia. They provided us suddenly with an unexpectedly detailed survey of the life, culture, and even the world of thought of those human beings whose descendants were to change the face of Europe a few centuries later.

These excavations were peculiarly favoured by fortune. As was the case some sixty years earlier, a kurgan from the last centuries B. C. was discovered near Pazyryk, in which, thanks to its extremely high and rough situation, even perishable substances were found preserved as if in a refrigerator. Certainly it had been robbed, but the horses, complete with harness and saddles, had remained unimpaired, and could be examined and compared down to the last detail, even to the contents of the stomach. A second piece of good luck was helpful in this case. It is probable that, during the work on the last wall which protected the horses, the axe broke, and the grave-robbers had no time to make the attempt again with a new tool.

The West could take only an indirect, yet unlimited part in these discoveries. The most important publications appeared outside Russia, and were illustrated with far better reproductions than parallel Russian works. The authors were the excavators themselves, and this fact warranted an exhausting report. When the Russians attached special importance to a discovery (e. g., the very similar Noin Ula finds), the Russian publication immediately appeared in French or English.

Since 1947, new treasures have been being brought to light out of the Pazyryk refrigerator. The situation has, however, fundamentally changed. The news that a »tattooed Scythian» had been found in Altai was made public by the press of the whole world. (That is, all the more, misleading, because it is based on the idea of a »Scythian Stage», which in Russian terminology embraces all cultures in the Steppes between 700—200 B. C.,¹⁾ a conception which is not generally accepted in the West). Exact reports are to be found in Russian works only. Their scientific value is conspicuous, but they are difficult to get at. The illustrations are rather poor and the articles lack a resumé in any foreign language. There is little hope of a rapid alteration of these circumstances. There is also little prospect — as far as I can see — of an authorized Russian scientist publishing an official report for the rest of the world.

These circumstances give me a certain right to attempt a short summary of these new excavations. It is also clear that I am limited to Russian printed publications.

Since the nineteen-thirties, however, further important progress has been made. We know, today, not only of the great kurgans, but also of:

1. Monuments which mark the long and complicated road to the origin of this fascinating culture and show the local roots of its development. They put a limit to speculation

¹⁾ See the excellent summary by Hančar 1950, pp. 69—70.

which warns us against trying to explain the Pazyryk Kurgans by far-fetched migration theories only.

2. Further, we know now of the graves of the »little man» of the same time. In this we are in the same happy position as in Transbaikalia. Just as Noin Ula does not stand alone, but rears up out of poorer burial-sites, so is the situation in Altai.

3. Today we know the various neighbouring cultures essentially better than we did in 1929. (In the Pamirs and in the Alai district, through the excavations of Bernshtam, in the northern and western anterior of Altai, through Griaznov's excavations, in Mongolia and Tuva through the only recently published results of Teploukhov's work, and in the further eastern districts, through the explorations of Sosnovskii and Kiselev's »Mongolian Journey»).

4. Thanks to the works of Debets, we can survey today the skull types which correspond to each phase of culture.

I believe it would not be fair to present-day research if I attempted, without this framework, a summary of the publications which are to hand, up to date, on the subject of the new Pazyryk Kurgans. Therefore, I have had to take it upon myself to present the whole development of Altai — more or less from the first appearance of the Europoids in Central Asia, up till the time of the erection of the last great kurgans.¹⁾

As we shall see, this is a continuous story, namely the story of the fate of the Europoids of Altai up to their highest cultural blooming, and also up to their great crisis caused by the invasion of those groups whose final establishment leads to a new era in the history of Central Asia, which culminates in the Khaganate of the Turks.

I. PRE-AFANASIEVO PERIOD.

I omit the Palaeolithic and Epipalaeolithic sites as they neither allow themselves to be torn away from the unity of the Siberian culture-province, nor are there any concrete relations traceable in the later cultures of Altai. As will become clear in the process of examination, the existence of such relations is, owing to other considerations, extremely problematic.²⁾

Therefore I begin with the Neolithic phase, and here I should like to make an advance survey of the neighbouring findgroups, so as to gain, at least, a few »solid points» in the surroundings.

In *Transbaikalia* and the *Angara district* the excavation work was carried out already in the 19th century. But before the excellent excavations and summaries of Okladnikov we had neither clarity nor chronological system.³⁾ He provided, here, proof of a continually developing culture of Taiga hunters, which, in its inventory shows living connections with the local Epipalaeolithic. The skulls discovered belong to a long-headed, broadfaced and clearly Mongoloid type, which perhaps can be rated as a result of heritage, as the few Late Palaeolithic skull remains found in Siberia, seem to belong also to the Mongoloid

¹⁾ I have had to restrict myself very much, owing to the wide choice of material. With a few exceptions, I have included only photos which have not already appeared in western publications. The same restriction applies to the description of the great kurgans. A further restriction is given by the Russian frontier. The Mongolian Altai is archaeologically unknown.

²⁾ The material up till 1940 is contained, listed, in MIA SSSR Nr. 2 (Paleolit i Neolit SSSR). Supplementary statements in Kiselev 1949, pp. 9—13. Levin offers an appreciation 1950b. The previous summary of Merhart (1928) includes many important observations — also for today. The critique of Kiselev (1951, p. 17) is not fair to a work written in 1928.

³⁾ Most important and most easily available works of Okladnikov are 1935, 1936a, 1937, 1938, 1939, 1949c, and 1949d.

division of race. Economic development makes its way slowly from the hunting of large animals to ever-increasingly intensive fishing. Stock-breeding, except of the dog, is not found. Reindeer-breeding, claimed for this culture by some students, is highly disputable.¹⁾ It is an important fact, that an age-old tradition of woodcarving exists here. We can discern an Isakovo and a Serovo stage.

The cultures of the steppe-belt stand opposite this Taiga province, to which others may be joined of which we cannot yet quite get hold. In *Kazakhstan* there is that complex which we, following Tolstov and Formozov, call «Early Kelteminar».²⁾ The people were rambling hunters in the great steppe districts, and fishermen by the rivers and in the oases. The stone tools show signs of certain microlithic traditions, but the geometrical silices, which are characteristic of large parts of Europe and the Near East, are completely lacking. The pottery yields pointed and round bottomed vessels, and shows a superficial relationship to Pit-Comb Ware. Domestic animals are missing.

In the *Gobi* some other complexes have been pointed out by Teilhard de Chardin.³⁾ Maringer has made valuable contributions and has, above all, shown that a certain similarity of form can be confirmed between the more eastern finds and the Baikal culture.⁴⁾ Besides this, a certain amount of borrowing from the Painted Pottery of the South has taken place.

Between the steppes and the northern forests we find an intermediate zone, from which the Krasnoiarsk region and the Minusinsk district are best known.⁵⁾

What is the situation of *Altai* in relation to these surroundings, now?

We know of the following finds from there:

1. A site near the village of *Kutum* on the Katun river, which Sosnovskii (1936) discovered during the excavation of Afanasievo kurgans.⁶⁾ The great age of the find is proved by stratigraphy: Under the mound of the kurgan was found an Afanasievo layer, with arrow-heads and remains of bones. Under them, separated by twenty sterile centimetres, a layer of Neolithic character. It contained scrapers, nucleus-like tools, knife-like blades with lateral retouche, and finally fragments of bone-tools, into chinks of which were sticking flint blades. The pottery remains came mostly from a large vessel ornamented with herring-bone designs, which corresponded in form with the ovally elongated pots of the following Afanasievo Period. The technique, however, was essentially different. The characteristic roughening of the walls which was brought about by rubbing with a tuft of grass, and which calls to mind certain forms of Chinese Neolithic pottery, was entirely missing.

Kiselev compares this material with the pottery which we know from the Kelteminaric

¹⁾ Most of the Russian specialists have now taken up this point of view. (See Vasilevich and Levin, 1951, pp. 86—87). The contrary position is once more presented by P. W. Schmidt 1951. The author is surely a great figure in the history of Ethnology but does not survey the archaeological material. He cites the important excavations of Okladnikov, not directly, as he quotes Myrov, who quotes Sosnovskii, who heard it from Gerasimov and he, in turn, from Okladnikov — so that not much is preserved, not even the correct name of the excavator nor the deciding fact that related sites had metal inventory and domesticated cattle and horses. All further discussion on this subject is omitted. (Cf. Flerov, the many works of Sosnovskii and Okladnikov himself). So the author has not even all the facts at his disposal which might support his theory. (Cf. the facts quoted in the above article). Thus I will not say he is wrong, but we cannot solve such an important question with such a scanty material.

²⁾ Tolstov 1946, 1948a, 1948b. Formozov 1949 and 1950.

³⁾ Teilhard de Chardin 1944.

⁴⁾ Maringer 1950, pp. 167—200, and especially p. 206.

⁵⁾ Kiselev 1949, pp. 11—13. Here further literature. Okladnikov 1949a.

⁶⁾ Kiselev 1949, p. 13.

Culture of Kazakhstan. He also finds a corresponding resemblance in flint material. Here, as there, the same knife-like blades with lateral retouche, nucleus-like tools, and similar scrapers. Kiselev believes he is also able to assign certain stray finds from the same district to this complex.

2. Perhaps still more archaic is a grave, which was brought to light under the culture layer of the *Chudatskaia Gora* site near Barnaul.¹⁾ In a 75 cm. deep trench without a mound was found the skeleton of a grown-up man, stretched out and lying on his back. As gifts, four horn angling-hooks joined together, were confirmed which are very like the Kitoi hooks of the Angara-Cisbaikal district, also a horn harpoon and some twenty stone objects, among these the usual series of knife-like blades with lateral retouche, parallel with Kuium and the Kelteminaric Culture. The complete lack of pottery is noticeable, and this, together with the outstretched position of the skeleton, gives the grave its peculiarly antique stamp.

3. Two graves, which Rudenko²⁾ brought to light by the *IAn-Ulagan* river in High Altai, are, as regards the stone inventory and the position of the skeletons, very similar. Here, also, pottery is missing, but intensively scattered ochre and the first appearance of a mound betray the transition into the Afanasievo Period. Debets includes these graves also, on account of the one skull which could be examined in detail, in the Afanasievo material.³⁾

In comparison with the situation previously described, the finds have the following significance:

a) They allow Altai to be included in the intermediate zone. It stands, however, much nearer to the Steppe culture than to the Minusinsk and Krasnoiarsk district.

b) Out of the whole steppe-belt we have no burials belonging to this period. Later, however, we find here only pure Europoid groups.

The skull of IAn Ulagan points out to us, that Europoids, also, were bearers of the Neolithic cultures of the steppes.

When we now imagine that the Baikal-Angara cultures, with their Palaeomongoloid skeletons, carry on the tradition of the Siberian Palaeolithic,⁴⁾ we are inclined to assume that the deviating Steppe cultures, with their Europoids, do not go back to the Siberian Palaeolithic, but immigrated from somewhere else. We could even produce reasons for this. The Siberian Palaeolithic apparently took the step towards the Mesolithic very slowly. Thus, other more highly organized complexes were given the chance to gain possession of wide districts of Central Asia.⁵⁾

These are, however, speculations, made the more difficult by a number of very divergent matters.

a) We know of no complex, from which we can, without objection, derive the Kelteminaric Culture and those related to it. Perhaps, as Maringer assumed, connections with Eastern European complexes really exist.⁶⁾ A fact which speaks for this, is that the typically geometrical forms belong to a late wave in Eastern Europe also.

¹⁾ Described in Griaznov 1930b, p. 4 Figs. 1—3, and 6—9. Kiselev 1949, p. 14.

²⁾ Rudenko 1926, Griaznov 1930b, pp. 4—5 Fig. 10. Debets 1948, p. 14. Kiselev 1949, p. 14.

³⁾ This skull is published among the Afanasievo skulls in Jettmar 1950, Pl. 10 Fig. 2. It resembles a Cromagnon skull. Cf. Debets 1948, p. 68.

⁴⁾ The Siberian Palaeolithic begins with forms which yet show resemblance to Europoid ones. In the latest layers this resemblance completely disappears. The parallels to hand point to China. This probably explains the connection of Sinides and Tungoids in one racial division.

⁵⁾ This would be a parallel to the occurrences in South-East Asia.

⁶⁾ Above all the Desna group would come into the question. Cf. Voevodskii 1950. Voevodskii and Formozov 1950.

b) A find in a cave, from Uzbekistan, and the skeletons from the Mariupol burial-site¹⁾ seem to point to the fact that, besides the Cromagnon type which we find in Altai, Europoids of more slender build were represented also, among the rambling hunters and the fishermen of Central Asia. Thus various migrations come into the question.

c) We have no idea if these Europoid groups really filled the whole steppe-belt, as far as Manchuria and the Amur district (for related microlithic sites reach so far).²⁾ Perhaps Maringer's interesting and important observation that the eastern groups of the Gobi show strong resemblance, in the stone inventory, to the Baikal district, points to the fact that, from the far past, tribes lived here which belonged to the Mongoloid division of mankind or to transitional forms.

We can only attempt accurate dating to a very small degree of exactitude. The Kelteminaric sites, for example, show agreement with more or less datable monuments in South Russia. In the Baikal district one can draw half-reliable conclusions from the arrangement of river terraces. Most point to the beginning of the IIIrd millennium B. C.

The affinities of the steppe-finds of Central Asia to the contemporary cultures with painted pottery in the South are very vague.³⁾ There must have been a distinct cultural frontier between the peasants and stock-breeders of Anau and their northern neighbours.

II. AFANASIEVO PERIOD.

In the next phase, we reach firmer ground. The situation is as follows:

In the wooded districts of *Cisbaikalia* and *Angara* the Kitoi and Early Glazkovo Cultures bear the mark of the consecutive further development of the former Serovo stage. They show the peak point of fishing.⁴⁾

In the *western Steppe district* also, no breach has appeared. The Late Kelteminaric sites have yielded only meagre metal remains at one place. Pottery shows signs of local traditions clearly, yet also signs of the invasion of elements which come from the great melting pot of South Russia, where, influenced by Middle Europe, the Tripolye Culture is split into a number of movable and partly even nomadic cultures. So it is not strange that remains of domestic animals appear for the first time in the Late Kelteminaric sites. They are sheep and cattle bones.⁵⁾

In the *Gobi* we cannot yet put matters into chronological order accurately enough to be able to recognize a similar phase. Kiselev's statements are also not sufficient.⁶⁾

The Bazaikha finds have yielded the fact that the *Krasnoiarsk* district has retained its intermediate position.⁷⁾

The excavations from this period made in the *Minusinsk Basin* are thus all the more interesting. Since Teploukhov, they have always attracted the attention of scientists.⁸⁾ Teploukhov recognized that the Minusinsk district at that time played a leading part in

¹⁾ Ginzburg 1949. Makarenko 1933.

²⁾ Gorodov 1936.

³⁾ Cf. the not very happy attempts made by Tolstov 1948 a, pp. 65—90. This is the more remarkable as Tolstov reports finds of shells from the Indian Ocean in one of the Kelteminaric sites. Had the microlithic cultures of India anything to do with the microlithic cultures of Central Asia? Nobody has tried to compare these two complexes.

⁴⁾ More detailed statements above this period are contained in the works which were mentioned in the previous chapter.

⁵⁾ Cf. the excellent statement in Passek 1949.

⁶⁾ Kiselev 1947c, pp. 357—359.

⁷⁾ Okladnikov 1949a, Kiselev 1951, pp. 65—66, Debets 1948, pp. 61—63.

⁸⁾ Lastly Kiselev 1951, pp. 22—54.

Siberia. For the first time we come across kurgans whose erectors knew of all large domestic animals, cattle, sheep, horses, perhaps also yaks, also that they not only used copper, but as the mortuary gifts of stone sledges (parallel to finds in mines) clearly show, they knew how to obtain it.

Among the pottery, painted vessels appeared. The chief types, though, are vessels with pointed bottoms, ornamented with herring-bone design and furnished with the typical roughening of the walls. The pottery differs noticeably, in all characteristics, from that of the neighbouring Taiga cultures.

The simultaneous appearance of so many new elements caused Okladnikov to assume that the Afanasievo Culture (this is what this particular facies is called) was brought into the Minusinsk district in some migration. At least, very strong Southern cultural influences are noticeable.¹⁾ (Vessel-painting cannot be confirmed either earlier or later, in Siberia, with one exception in the last centuries B. C.). The conjunction of cattle and horse-breeding with this culture, coming from the South, points decisively against any possibility of a local origin in Siberia, and against horsebreeding having sprung from reindeer-breeding.²⁾ Russian scientists attributed even agriculture to the Afanasievo Culture. The assumption is a probability, but is not vouched for.³⁾

As to the dating, we only know that the beginning of this culture must go back to the IIIrd millennium B. C.⁴⁾ The usual figures, 2500—1700 B. C. are unfortunately only a «cherished habit» (as Herzfeld once said).

Kiselev attributes the following *Altai* monuments to this stage:

1. Eleven burials near the village of *Kuim* at the Katun river, the same graves during the exploration of which Sosnovskii (1936) discovered the previously mentioned Neolithic site:⁵⁾ Under low kurgans, consisting of a mixture of earth and stone, lay single graves. As an exception, children were, in two cases, buried with their elders. On one child, a separation of the head from the trunk could be proved. The skeletons lay on the back with the feet pulled up, only one skeleton lay on the stomach. Four graves showed a scattering of ochre. Among the gifts are mentioned sheep bones, nine egg-shaped vessels of the usual Afanasievo type, worked at with bunches of grass, and ornamented with herring-bone designs. A characteristic difference from the Minusinsk vessels exist in that a straight or flaring neck appears on the shoulder of the vessel (Pl. IA: 5), and two vessels have loops. An awl and the handle of a copper knife were of bone. This knife is clearly different from the inarticulate copper daggers which appear in the Minusinsk district and in the old Pit Grave Culture of the West (Pl. IA: 6). It is asymmetrical. The thickened handle forms an exact continuation of the back. The blade is wide and rounded at the point and base.⁶⁾

¹⁾ We cannot say where this movement comes from. Okladnikov thought of Iran, but without being able to bring in any detailed conformation. Thus it is only possible to make guesses at the linguistic and ethnic relationship of this old layer.

²⁾ It is curious that the reindeer seems lacking from the list of fauna in the Altai graves at that time. Perhaps, it only came to the Sayan and Altai with the worsening of the climate in the Ist millennium B. C.

³⁾ Kiselev 1951, p. 48.

⁴⁾ The question of the appearance of the horse in this culture is much more important than Lundholm believed, and cannot therefore be disposed of, as easily Lundholm disposed of it (1947, p. 167).

⁵⁾ Cf. Sosnovskii 1941, pp. 304—306, and Kiselev 1949, pp. 34—35.

⁶⁾ It is reminiscent of the knives from the Catacombs in South Russia.

2. As already mentioned, Sosnovskii believes he can join up, together with the kurgans, a dwelling-site which lies above the Neolithic one. Here he found flint blades, pottery fragments, arrow-heads, and animal bones.

3. Kiselev describes more exactly nine earth kurgans, which he himself excavated on the east bank of the *Kurota*, 1 1/2 km. from where it flows into the *Ursul*.¹⁾ Two of these were surrounded by stone circles. Also there were three other simple stone circles with a grave in the middle, two of which he explored. The covering of the actual grave (about 2.5 × 1.7 m., depth 1.5 m.) was achieved by means of beams or massive stone slabs. Wall furnishings were not noticeable. Scattering of ochre was confirmed again and again. There were mostly single graves. The skeletons lay flat on the back, the hands either stretched out by the body or pushed under the pelvis. One grave contained two, one three, one even five bodies, all lying on the left side, with drawn-up knees, each close behind the other. The orientation was chiefly with the head towards the east or northeast, (two towards the west, two towards the north-west). From the inventory of these graves, Kiselev reports a stone sledge (the use of such tools in mining has already been mentioned), a pestle, copper rings for ornament, horn fingerings, and little bone tools like shovels, which perhaps served as weaving tools. Animal bones are rare. Once the lower leg-bone of a yak was found, but in the next grave the claws of a king-eagle, so that any conclusion about yak-breeding seems extremely questionable. The pottery was again represented by two egg-shaped vessels with clearly defined shoulders (Pl. IA: 1), but also by flat-bomb-shaped vessels which show some characteristics of Andronovo pottery (Pl. IA: 2,3). A similar transition situation can be concluded also from the ornamentation, which besides the usual herring-bone design shows geometric patterns, made by a dented stamp. On the other hand one finds patterns which consist of crescent-shaped impressions reminiscent of certain Late Kelteminaric ornamentations, yet also material which Bernshtam reported from Issyk Kul in the South.

A problem of its own is a shallow bowl with low foot, cord ornamentation, and a handle at the side (Pl. IA: 4), which all specialists bring into connection with the cross-footed burners of South Russia, perhaps even with the burners of the Pazyryk time of Altai.

When we consider this material, we can, in spite of its dearth, reach some general conclusions as to the cultural position of Altai:

- a) Altai is a part-province of the Afanasievo Culture.
- b) The deviations to hand, from Minusinsk material, point toward an active connection with South Russia, above all with the culture of the Catacomb Graves, the significance of which, for the ethnogony of Central Asia, cannot yet be foreseen.²⁾
- c) A peculiarity of Altai development seems to be that hunting comes more strongly to the fore here, than it does in the Minusinsk Basin.³⁾
- d) The people who lived in the Altai during this period were Europoids with Cromagnon features.

¹⁾ Kiselev 1949, p. 35.

²⁾ If we consider, that this culture has actual connections with the Danube Basin, we must think also of linguistic affinities. The opinion that this culture is the propagator of Indo-European languages can be neither rejected nor finally asserted. In the Minusinsk Basin also stone battle-axes were found. (Kiselev 1951, p. 55.)

³⁾ Kiselev has used the appearance of Andronovo features in the Afanasievo Culture of Altai to construct a local origin of Andronovo forms in Altai. It seems to me, rather, that a hint is contained therein, that Altai preserved the Afanasievo forms at a time when the Andronovo complex was already an accomplished fact in other districts. Altai is essentially rougher in climate and is not an original ground for agriculturists as the Andronovo Culture is.

III. ANDRONOVO PERIOD.

Essentially different was the constellation in which the inhabitants of Altai took their place some centuries later.

In *Cisbaikalia* we meet with a culture, which simply represents the consecutive development of the Glazkovo stage.

It may be noted as its most peculiar feature that the dead were laid in the grave clothed and with ritual objects which show a striking similarity to the present inventory of the Tungus peoples.¹⁾ The skull-form of the Glazkovo people also corresponded with that which has been confirmed in the case of the Tungus tribes of today, North of the Baikal.²⁾ These observations stand in direct opposition to the assertions of Shirokogoroff who saw the Tungus as original pig-breeders, and as fairly late immigrants from North China into the forest districts.³⁾

I should like to bring this to the fore, because Eberhard, in identifying his «North-East Culture» with the forerunners of the Tungus⁴⁾ had a cultural picture before his eyes, which goes right back to Shirokogoroff and certainly stands and falls with Shirokogoroff's assertions. I consider this a typical example of the consequences which speculative ethnology basing its judgement only on more modern conditions before the existence of excavation can have for neighbouring sciences.⁵⁾

The Glazkovo Culture was in any case borne by a numerous fishing and hunting population, who, however, had not yet their own metallurgy, and can therefore count as Neolithic. Extensive trading relations existed, which reached as far to the West as the Urals.⁶⁾

In the South stood Cisbaikalia in contact with a culture group which also still lived at a Neolithic level, but maintained close relations with China or, at least, with the Chinese borderland. Okladnikov's find of a tripod of Ting type on the Selenga⁷⁾ is extraordinarily characteristic. This culture seems to have reached from *Transbaikalia* fairly far to the South, right into the territory of the present day People's Republic of Northern Mongolia.

The *Western Steppes* form quite a different province. The Minusinsk district and Kazakhstan melted, then, into an amazingly uniform culture, the Andronovo Culture. We owe our knowledge of the Minusinsk Basin to Teploukhov and Kiselev, who wrote the first summaries.⁸⁾ Griaznov⁹⁾ and Podgaetski¹⁰⁾ worked in the West.¹¹⁾ The exploration started, everywhere, from the burial-sites. In low earth kurgans and shallow graves, which were only marked by a stone fence, a metal inventory was found, which, according to its agreement with Caucasian finds and other such finds from the Timber Graves, also from Seima, could be comparatively easily dated. The actual unity is proved by pottery.

¹⁾ Okladnikov 1950a, with good illustrations.

²⁾ Debets 1948, pp. 56—61.

³⁾ E. g. Shirokogoroff 1923 and 1926.

⁴⁾ Lastly, Eberhard 1948, p. 20.

⁵⁾ Such a far-reaching part taken by the Tungus in the formation of the Chinese ethnos seems to me very doubtful. Cf. the modern works of Zalkind (1948 and 1950) and Vasilevich (1946 and 1949a), further Vasilevich and Levin (1951).

⁶⁾ Cf. Jettmar 1950, pp. 119—120.

⁷⁾ Okladnikov 1950b, p. 86.

⁸⁾ Kiselev 1949, pp. 40—52.

⁹⁾ Griaznov 1927.

¹⁰⁾ Podgaetski 1940.

¹¹⁾ The excavations in Khorezm form a further supplement. There also we meet with only a local facies of the Andronovo Culture. Cf. Tolstov 1948 a, pp. 76—77.

Bowl- and flowerpot-shaped vessels were found, well smoothed, decorated with cog-like patterns or scratched drawings. Beside triangles and dog-tooth patterns, meanders appear repeatedly. Now and then come complicated carpet-like patterns. The food gifts show that the Andronovo people bred cattle, horses and sheep. Naturally, in such a wide-spread district, there were certain local differences. Most strongly differentiated is a complex which has become better known only in the last few years, and on which Bernshtam reported,¹⁾ that is to say, sites with an inventory like the Andronovo one in Semirechia and in the anterior of T'ien-shan.

We have at present no idea from which district the formation of this great unified complex started. The skull finds, which were brought to light in connection with Andronovo graves, are everywhere Europoid. They differ from older skull finds in the same districts owing to a shortening of the maximum head length, and owing to a rounded tendency which brings them near to the modern Pamir-Ferghana type. Kiselev attributed a Southern origin to this culture. Also the fact that the meander is best traced back to the Painted Pottery supports this thesis. At present, no special connections with Europe can be proved,²⁾ and this does not exactly simplify the problem regarding the Indo-Europeans. The Andronovo Culture also deserves our attention in the question of the mounted nomads. It shows everywhere, a strong tendency to settle. All signs of nomadism or mounted warfare are lacking. The Russian scientists look upon it as the peak point of the complex economy with cattle-breeding and agriculture in the Steppes.

The problem as to which threads, if any, of this culture pass over into West China is also unexplained. In any case, we can hardly believe, that China got its knowledge of metallurgy from the Andronovo Culture, where metallurgy is very limited and dependent on other centres. The few plausible parallels between China and the West³⁾ hint at the southern mountainous region, especially at Luristan.

For *Altai*, at this time, we have at our disposal, as regards finds:

The excavations of Kamenskii near *Malyi Koitas* on the river Kysyl-Su (80 km. from Semipalatinsk on the road to Ust-Kamenogorsk) (Pl. I B: 1,3—13), near *Kara-Uziak* (16 km. from Ust-Kamenogorsk) (Pl. I B: 2) and near *Kokpekt* (near Karadzana, 25 km. from Ubinskaia).

These have been discussed repeatedly, first by Teploukhov,⁴⁾ then by Griaznov⁵⁾ and finally by Kiselev.⁶⁾ As early as 1926, the sherds left no doubt that here it was a question of vessels of the Andronovo type.

This permitted a number of stray finds, containing similar fragments, already partly collected by Radloff, to be attributed to the same period.

Fragments of an Andronovo vessel were, as Teploukhov and Kiselev remarked⁷⁾ found in a half-destroyed grave near the Lake *Sary-Bulak* (Chingis-Chain).

In a later work, Griaznov mentions Andronovo graves near the village of *Klepikovo*, in the Uch-Pristansk district (on the Ob between Barnaul and Biisk).⁸⁾

¹⁾ Bernshtam 1949b and 1950.

²⁾ If one is of the opinion that the numerous similarities to the Proto-Hallstatt pottery ornamentation point to a cultural relationship, one cannot yet trace Andronovo from the West. These features are, according to my knowledge, older in Asia than in Europe. Thus only an eastern origin, or an origin from the same source, would come into the question. Cf. Hančar 1947.

³⁾ Cf. Arne 1940.

⁴⁾ Teploukhov 1927, pp. 85—87.

⁵⁾ Griaznov 1930b, pp. 200 and 209, Figs. 22 and 25.

⁶⁾ Kiselev 1951, pp. 89—90.

⁷⁾ Kiselev 1949, p. 52.

⁸⁾ Griaznov 1930b, pp. 5 and 10—11, Figs. 29 and 30. Kiselev 1949, p. 52.

Finally, some finds, which Sergeev made in 1929/30 in graves near the village of *Krasnoiarskoe* (Smolensk district, Kemerovo province).

The few places where dwelling-sites were found¹⁾ are, as in the Minusinsk district, much destroyed. We know of such from the river district of the Biia and the Katun, also they were confirmed in the upper Irtysh district.

As characteristic of all these finds, Kiselev brings to the fore:²⁾

The uncommonly wide variation in the construction of these *graves*, shallow graves, above ground, marked only by a stone circle, are found next kurgans surrounded by square stone fences. Sometimes the stone fence is entirely missing. The dead lay in stone chests. According to inexact reports, single graves appear, as do also collective burials of men, women, and children.

The manifold character of all this finds its parallels in West Kazakhstan.

Regarding the *metal inventory*, as in West Kazakhstan, the extremely irregular distribution of it, in the various graves, is conspicuous. Kiselev thinks he recognizes even a social differentiation here, especially as the kurgans show objects which are more richly and carefully made. Gold is very frequent, used mostly in the form of covering plates, on copper or bronze (Pl. I B: 7, 9, 10). We must not forget that in Altai, we are in a gold-bearing district of significance which had been exploited for centuries.

The shapes of ornaments conform essentially to those of the Minusinsk district. Here, as there, are the same little bronze tubes, cast or bent, rolled together from bronze plates. The nailshaped earrings (Pl. I B: 10), the animal-tooth pendants (Pl. I B: 8) and the stone plates bored through (Pl. I B: 11).³⁾

A flat Andronovo dagger, with light carving at the base of the blade, is characteristic (Pl. I B: 13).⁴⁾ The armrings conform very much to the examples in West Kazakhstan. The golden pendants (Pl. I B: 12) from such a grave represent, perhaps, the original form of the pediform pendants of the Karasuk Culture.⁵⁾

The *pottery* can be fitted into this picture without difficulty. The two main groups of the Andronovo pottery are to be found, namely, the bowl-shaped (Pl. I B: 3,4), which is strongly reminiscent of the Afanasievo time, and is correspondingly ornamented, and also the progressive flowerpot-shaped pottery, which sometimes bears highly developed meander ornamentation (Pl. I B: 1, 2, 5, 6). Kiselev⁶⁾ thinks that children, especially, were furnished with little vessels of an old type. Griaznov⁷⁾ confirms that the conformation to the Minusinsk group is stronger than it is to the sites of Western Kazakhstan.

Thus the complete picture of the Andronovo finds in Altai and its anterior shows, on the one hand, strong relations with Western Kazakhstan, and on the other hand, with the Minusinsk Basin.

A comparison with the finds reported by Bernshtam⁸⁾ from Semirechia and the T'ien-shan shows, further, that Altai also held a certain intermediate position between the two other provinces of the Andronovo culture and the newly-appeared one. The types described in Griaznov⁹⁾ can be used as dazzling proof, as they have complete analogies in this new Andronovo province.

¹⁾ Kiselev 1949, p. 54.

²⁾ Kiselev 1949, pp. 53—54.

³⁾ Cf. Griaznov 1927, p. 209 Fig. 25.

⁴⁾ reproduced by Griaznov 1927, p. 209 Fig. 25/1.

⁵⁾ Cf. Jettmar 1950, p. 93 Pl. 2 Figs. 1—4.

⁶⁾ Kiselev 1949, p. 53.

⁷⁾ Griaznov 1927.

⁸⁾ Bernshtam 1950.

⁹⁾ Griaznov 1930b, p. 155, Figs. 13 and 14, further p. 160 Fig. 6, I/3.

Thus the confirmations which we can make, are relatively simple:

- a) Altai belongs to the Andronovo Culture.
- b) Altai shows a strong continuous survival of Afanasievo elements, and this, as already mentioned, presumably goes back to its functioning as a retreat district, where hunting was still important.
- c) Altai holds an intermediate position between the Andronovo provinces which are known to us.
- d) Altai was, as far as evidence exists, inhabited by Europoids only.

IV. KARASUK PERIOD.

While *Cisbaikalia* undergoes no fundamental changes during the transition into the Shiversk stage, Okladnikov's explorations in *Transbaikalia* and *Northern Mongolia*, especially at the *Selenga*¹⁾ have shown the appearance of a new culture. This has, on the one hand, clear relations with the Taiga, on the other hand, it knows of cattle-breeding, and has types of metal at its disposal which are familiar to us from An-yang and the oldest known Ordos types. Okladnikov dates an angle knife of archaic shape back to the 13th century B. C. Together with this metal inventory (the first that we can confirm in *Transbaikalia*), appears pottery with pseudotextile decoration, which shows close affinity to the Shang pottery, but also to the finds of Ch'eng Tzu Yai.

In the *Ordos region* there must have existed a similar culture at which, owing to the complete lack of systematic excavations, we can, of course, only guess from stray finds and its connections with neighbouring cultures.²⁾

In contrast to these new centres characterized by their relations to China, the *Andronovo district of the West* goes fairly straight ahead in its development. The Late Andronovo time brings a stronger development of agriculture. We know of widespread, strong settlements, on whose places of sacrifice bread and grain were laid. This best characterizes the situation.³⁾

Broad districts, however, are torn out of the old Andronovo complex:

1. Tolstov⁴⁾ claims to have established the invasion of a culture from the South, in the basin of *Lake Aral*, which perhaps harmonizes with the statements of the early Islamic historians, and in any case with the view of those scientists who bring the Khorezmians (Khwarazmians) into especially close touch with the Persians.⁵⁾

2. The *Minusinsk Basin* is lost through the breaking in of a Sinide group, which brings with it an inventory of Ordos type. Through this immigration the Karasuk Culture, in a restricted sense, originates.

A similar complex appears in *Semirechia* and in the *anterior of T'ien-shan*.⁶⁾ The metal types, the pottery and the burial customs, are all related, but not identical with the types of the Karasuk Culture. At first, this complex was thought to have been derived from the Minusinsk Basin,⁷⁾ but in the last few years it became clear that here we find so many

¹⁾ Okladnikov 1950b.

²⁾ I do not need to say more about this Ordos culture here. The few facts which can be confirmed have been brought together in my article of 1950, and in the previous detailed discussion between Karlgren and Loehr. I cannot say anything on this subject about Japanese research. Professor Oka informed me of several further results, but most of them are not yet published.

³⁾ Cf. Krivtsova-Grakova 1948, and Kiselev 1949, p. 55.

⁴⁾ Tolstov 1948a pp. 77—78. (Suiargan Culture).

⁵⁾ E. g. Altheim 1950, pp. 283—289.

⁶⁾ Bernshtam 1949b and 1950, pp. 104—106.

⁷⁾ Kiselev 1949, pp. 87—93.

peculiar types not represented in the Minusinsk finds, but only in the Ordos district and in China, or exclusively in China,¹⁾ that we must assume that there was an independent connection between Semirechia and the Far East.

Has a similar but independent migration taken place here? Or, more probably, a cultural diffusion originating from metallurgical centres in China or the Chinese borderland (no Sinide skulls have been reported in Semirechia up to now)?

Or was there, here in Semirechia, a culture which has strongly influenced China?

The finds of Semirechia are scanty and difficult to classify. Thus we have no basis for such bold migration theories. I only wish to point out that the types which are especially related to Chinese finds, cannot be derived from the local Andronovo Culture nor from other Siberian complexes known up to now. They are much closer to Iran, perhaps also to the Near East. Perhaps we have, here, only a side-branch from another southern complex, between which and China a continual cultural exchange existed.

In any case, it is very important that we now have several cultures all called «Karasuk» by the Russians and all related to China of the Shang. I do not believe, we should decide which is older and which is younger, before we survey these cultures to their whole extent. Some of these cultures had an Animal Style (An-yang and Ordos, the Minusinsk Basin and Transbaikalia). Kiselev thinks we must assume an Animal Style for Semirechia also.²⁾ This is perfectly possible, but cannot be confirmed up to now.

Let us try again to find a place for Altai material in this picture:

Already in 1930 it was clear to Griaznov³⁾ that graves existed among the material which had been found in the course of the nineteen-twenties, in the river district of the Ob between Barnaul and Biisk, that is in the *anterior of Altai*, namely graves which, at least, were contemporary with the Karasuk Period.

In the same year, Sergeev's⁴⁾ excavations brought the confirmation. He discovered graves near the village *Krasnyi IAr* in the Smolensk district and near the village of *Kamyshenka* in the district of Uch-Pristansk. The excavations near Kamyshenka, which were also continued in the following years, yielded, under shallow kurgans, twenty-five graves, in twelve of which it was possible to judge the burial customs fairly exactly.

In trenches, the measurement and shape of which could no longer be established, single burials lay mostly at a depth of 1/2—1 1/4 m. Only two graves contained a male and a female skeleton, and one held four skeletons next to each other. The dead lay without exception with the feet slightly drawn up, and on the right side, in six cases with the head to the west, in five to the southwest, and in one to the south. There were usually two vessels next the head, and sometimes a bronze knife. If there were a third vessel, it stood near the feet. The forehead was adorned with a diadem of beads, or with a closed bronze ring round the head. Remains of neckwear could be confirmed. Sometimes rings for the temples lay by the side of the head. Armrings were round the wrists and the fingers were adorned with rings.

On considering these rich gifts more closely, one can easily separate the objects which are well-known in the Minusinsk district. For instance, the wire-rings which were found on the hands and temples, bronze buttons which appeared, here, as part of the diadem, and, with the characteristic loop at the back, represent a guiding element. Also the combination of several little bronze discs, joined together in a row, is very frequent. Pendants and beads of bronze sheathing are frequently found.

¹⁾ Bernshtam 1949b, p. 344.

²⁾ Kiselev 1951, pp. 177—183, and 288.

³⁾ Griaznov 1930b, pp. 5—6 and 37—45.

⁴⁾ Kiselev 1949, pp. 88—90.

Other objects, however, show, in spite of their affinity to Karasuk forms, a characteristic local note, e. g. the knives. They are short and massive and furnished only with a little opening on the upper part of the handle. A single example has the light curve and the greater length which characterized the older types. Most of the knives are much more strongly reminiscent of Early Tagar types than of those of the actual Karasuk time

A long awl and a nail-like needle, which presumably served to pin up a garment, are also singular.

Sharpening stones are frequent, and extend from here far into the Scythian epoch, in the same shape.

Also the diadem of thin bronze is a form appearing here for the first time and reaching far into later periods. The temple-rings or earrings which look as if they had been made out of a nail, find their closest parallels among the remains at the «older cemetery» of Tomsk. They are, also, not unknown among the Ananino finds. The singular broad armlets of thin bronze presumably represent a development of the Andronovo spiral. Cylindric beads of white paste represent a highly archaic and exceptionally widespread type.

The technique and shape of the pottery conform to that of the Minusinsk district. In Altai, however, the flat bottom of the Andronovo vessels has completely remained, and the neck is distinguished from the shoulder by a clearly seen cut. In this we trace a consecutive tradition. In ornamentation, too, the local element seems to dominate. Kiselev¹⁾ delivers an exact description of the designs and regards as characteristic the continuation of ornaments which were already present in the Andronovo time.

A certain tradition may lie in the fact that no finds of bones of domestic animals have been made in the graves.

Krasnyi IAr can, unfortunately, only supplement this picture by very little. Pendants of wild sheep's teeth (maral) can probably be considered as amulets, and biconic beads as a heritage from the Andronovo time.

The graves excavated in 1935 by the Biisk Museum near the village of *Surtaiskoe* in the Staro-Bardinsk district, on which Kiselev reported²⁾ are at present inadequately described, only the pottery was published by him (Pl. II: 17—22).

The graves which Griaznov³⁾ discovered can therefore serve as the most important supplements. They lie in the dune-land *Blizhnie IElbany* near the village of Bolshaia Rechka, not far from the Ob, about halfway from Barnaul to Biisk.

There were five earth graves without outward characteristics. The dead lay on the right side, crouching, with the head to the south-west. Again the usual little copper and bronze ornaments were found, also the large temple-rings, in the shape of a nail bent into a ring. At the side of the head stood Karasuk pots, but with flat bottoms. The ornamentation, geometric and of the usual Karasuk type, was impressed with a smooth unindented stamp. Sometimes there were signs of incrustation with white paste, which may probably connect up with the co-existence of this technique in the Lake Aral district, in the Caucasus and in the Danube Basin.

In one grave, three male skeletons were found next to each other.

In this connection Griaznov draws attention to the stray finds near *IEniseiskoe*, *Fominskoe*, *Dalnye IElbany* and *Bolsherechenskoe*. The result up till now is confirmed by these finds.

¹⁾ Kiselev 1949, pp. 90—91.

²⁾ Kiselev 1949, p. 88.

³⁾ Griaznov 1949, pp. 112—114.

We could, so far, observe a clearly outlined complex. The excavations in the *Kurai-Steppe*, which were undertaken at two stone circles, and which revealed shallow graves, seem to hint that this complex stretched even as far as *South Altai*. Unfortunately, there is only insignificant material, which in no way differs from that already mentioned.

Also in *South-West Altai*, in the Semipalatinsk district, we know only stray finds. Thus we are referred back to the attributions. Griaznov took the line of assigning all types, which went beyond the mutual original remains of Andronovo forms, yet were not yet Scythian, to the Karasuk Period. Thus he arrived at highly singular types of knives (Pl. II: 4—9 and 12—14), which, now, on the one hand, connect up with the knives of North Altai which we mentioned before, but on the other — and that is exceptionally significant — find clear parallels among the Ordos knives.¹⁾ Also the daggers (Pl. II: 1—3), picks (Pl. II: 10, 11) and flat axes (Pl. II: 15, 16) are highly specialised.

If one compares these finds with those in neighbouring districts, one sees that there is obvious agreement with those of the T'ien-shan district. In pottery also, the South-West district differs from the rest of the find-material, and points in the same direction.

Thus, one can sum up in the following statement:

The culture of Altai forms a singular variation of the Karasuk Culture. Characteristic of it are the following points:

- a) Very strong Andronovo elements, with which the persistence of the ancient racial type corresponds.²⁾
- b) Borrowing of certain elements from the Minusinsk district.
- c) Other features, which suggest the Karasuk, nevertheless certainly do not spring from the North-East.
- d) They connect up the Altai with the «Karasuk» province in Semirechia and the anterior of T'ien-shan, but also with the Ordos province.

V. MAIEMIRIC PERIOD.

In the beginning of the first millennium B. C., there was a definite frontier of culture between West and East (Andronovo and Karasuk) in the steppes. In the next period, the region of the steppes grows to be a uniform territory, which stretches from the Pannonic steppes to China, and in which warlike mounted groups appear everywhere.

Western research is often inclined to make the extensive migration of certain peoples responsible for the appearance of mounted warriors in so many places.³⁾ In opposition to this, Russian research tried, for years, to show that simultaneous processes at several points, fairly independent of one another, have led to the formation of «mounted cultures», namely the splitting up of the agricultural and cattle-breeding complexes (i. e. in this case, of the Andronovo and the Karasuk peoples) into settlers on the one side, and cattle-breeding nomadic tribes on the other.

There, where we have enough material at our disposal, for instance, in Middle and East Europe, the excellent work of Harmatta⁴⁾ has shown that the truth in most cases lies nearer to the Russian extreme. The typology teaches us that the European tribes received the idea of the metal bit from abroad, probably from Caucasia — this presumably means a warlike attack by the Cimmerics or some other mounted people — but they created their own forms, beginning with the native string-snaffle with horn cheek pieces.

¹⁾ Such ordos knives are mentioned by Kiselev 1949, p. 52.

²⁾ Kiselev 1949, p. 93.

³⁾ E. g. Haloun 1937, Janse 1930, p. 99.

⁴⁾ Harmatta 1948.

This means again that they were not driven away but reformed themselves after the first shock: They became mounted peoples themselves, in their turn forcing their neighbours to follow their example.¹⁾

In addition, migrations can also be confirmed, which led to permanent settlement of the migrants among the native peasants.

The clearest and best-known examples of this are the Scythians. Russian explorers have upheld for years,²⁾ for theoretical reasons, the idea of the autochthony of the Scythians, and, by the failure of their thesis, they have supplied the best proof that the ancient truth uttered by Herodotus cannot be refuted even by modern excavations: The «Royal Scythians», with their Animal Style, their cauldrons, their iron weapons and their bloodthirsty rites, came from Asia.

Therefore we must now ask ourselves, as regards the Asiatic Steppe region, which mounted peoples immigrated there? Which originated from native peasants and from the cattle-breeding stock? In what order did these people go through such a change? Who was the «initiator» of this change?

The stock tribes *North of the Caspian Sea*, described in ancient sources as *Sauromatians*, are considered by Rostovtzeff³⁾ to be just such immigrants from the East as the Royal Scythians. Grakov⁴⁾ and Smirnov⁵⁾, in emphatic contradiction, have defended the autochthony of these groups, and pointed to their connection with the local Late Andronovo Culture. In my own opinion, their works show only a strong local component which has bound itself up with components of the immigrants. The Animal Style, in any case did belong to the foreign components.

The simultaneous development in the territory *East of the Caspian* and in the *Aral district* has first become clear owing to the observations of Tolstov.⁶⁾ He confirmed mighty refuge fortresses (dated, by arrow-heads, 6th—4th century B. C.) in the Khorezm Oasis. The walls of these were divided into habitable rooms and the free space inside these fortresses served to take in the flocks and herds. The builders were probably intensive cattle-breeders, and only later on did they become mounted warriors. The *Massagetic confederation* was created out of stock from this district.

In the *Minusinsk territory* the appearance of the Tagar Culture, which embodies a moderate mounted warrior element, is closely connected with an almost complete change of racial type. Instead of Sinides, we suddenly encounter Europoids. All the same, the continuance of the Karasuk tradition can be clearly recognized in pottery and metal tools. We do not know how this can be explained. Presumably the Tagars did immigrate, and only took over the native technique.⁷⁾ Because of this change alone, any idea that the Scythians or their Animal Style originated from the Minusinsk Basin⁸⁾ is hardly credible.

In the *T'ien-shan* and *Pamirs*, thanks to the work of an expedition led by Bernshtam, a complex was confirmed, which is distinguished by Animal Style and mounted nomadism.

¹⁾ This process reminds of an infection or better of a «chain reaction». A similar process has taken place in the full light of history in North and South America among the Indians of the steppes.

²⁾ Cf. Hančar, 1950.

³⁾ Rostovtzeff 1931, pp. 477—484.

⁴⁾ Grakov 1947.

⁵⁾ Smirnov 1950.

⁶⁾ Tolstov 1947c and 1948a, pp. 91—107.

⁷⁾ Or the bearers of the Andronovo culture never died out, and only constructed their burials more simply (e. g. above ground) during the domination of the Karasuk people. Cf. Jettmar 1950 and Kiselev 1951, pp. 184—260.

⁸⁾ Cf. Grousset 1948.

Bernshtam¹⁾ claims that it originated locally, from the Karasuk Culture of the district, and that it was completely developed by the 8th century B. C. He considers these peoples to be identical with the Sakas of the antique tradition.

In *Transbaikalia* and *Northern Mongolia* a transition to nomadism and mounted warrior conditions can be observed. This appears so clearly in local forms, and includes so much preservation of the native Mongoloid type that no doubt is left as to an autochthonic origin. Yet the graves still contained no horses. Guiding elements of this culture are the «stag steles», i. e. standing stones, on which stags are represented in Animal Style. We describe this facies as Stone Tombs Culture, Type I.²⁾

In this connection, I should like to mention that Kyzlasov and Margulan³⁾ created a small sensation when they made it probable that the *Karaganda group* of the Karasuk Culture is, in reality, of later date, and could be joined up with the Stone Tombs. Thus we can presume, for the first time, the push forward of a Far East group to Kazakhstan, as early as the first half of the 1st millennium B. C.

We do not know what was happening in the *Ordos region* at this time. Stray finds suggest that things took their course as in Northern Mongolia or T'ien-shan. But it is not possible to judge how much autochthonic development, or immigration, may have taken place.

To this time belong finds in the Altai district which Griaznov reports in a popular publication⁴⁾ and which he summarizes as «Maiemic Stage» according to Adrianov's excavations in the Maiemic Steppe. From this results the fact⁵⁾ that the difference already arising in the Karasuk time between the southern mountainous Altai and the northern foreland, is intensified to such an extent that one can summarize the finds of the northern district as a special culture district.

1. Anterior Altai. Bolsherechensk Culture.

In 1949, Griaznov speaks of a Bolsherechensk Culture and means these same finds which he denoted earlier as a northern subgroup of the Maiemic complex. The site of *Bolsherechenskoe* on the Ob, 60 km. above the town of Barnaul, led to the name.⁶⁾ It was explored by Griaznov in 1925. He was able to set apart a dwelling-site with various layers, one of which belonged to the Maiemic time; two others, however, can presumably be reckoned to about the time of the birth of Christ. All three layers contained plenty of bones of domestic and wild animals, also plenty of fish bones and scales. Horses, cattle and sheep were bred. Bones of wild animals (maral, deer, wolf, fox, hare, otter, sable) were present, which show that besides the breeding of domestic animals and fishing, hunting, especially of fur-bearing animals, played a very important part in the life of the old Bolsherechensk people. As to pottery remains, sherds of round-bottomed vessels were found, which differed from Karasuk vessels owing to a more indefinite form and ornamentation (e. g. Pl. III A: 10). Arrow-heads of bone and bronze are reported by Griaznov as well as various small articles of horn and bone. Kiselev adds that there is no evidence of agriculture, but that the tendency to settle is proved by the thickness of the layer and by the highly developed pottery. He speaks of cup-shaped vessels and

¹⁾ Bernshtam 1949b and 1950. Bernshtam's dating is to be taken with precaution. Cf. Griaznov's severe critique (1945).

²⁾ Cf. Sosnovskii 1940 and 1941. Kiselev 1947c, pp. 361—367 Figs. 3—5.

³⁾ Kyzlasov and Margulan 1950. Accepted by Kiselev 1951, p. 318.

⁴⁾ Appeared in «The history of the peoples of the USSR», 1939, which is not generally accessible.

⁵⁾ Griaznov 1947a, pp. 9—17.

⁶⁾ Griaznov 1949.

reports that the walls of the vessels are frequently indented from outside and inside alternately as decoration (Pl. III A: 11). Also the quality of the clay is different from that of the Karasuk time. It finds its parallels in the vessels of the Early Tagar Period in the Minusinsk district.

The knives seem to be still more primitive than the oldest known Tagar ones. Also, the four-edged awls without knob at the end represent an archaic element in this late period. The same is true of the arrow-heads (Pl. III A: 8). They are rhombic, or furnished with a small hook.

Griaznov collected plenty of sherds in 1925, from a dwelling-site on the dunes near the *Bystriansk Kordon* on the Ob, 50 km. from the town of Biisk. Among these, besides bones of domestic and wild animals, there are also fish remains. Broken pieces of crucibles and drops of melted copper are also important, as evidence of local metallurgy.

In 1946, Griaznov examined another dwelling-site on the dunes near *Blizhnie IElbany*, at almost the same place where Karasuk graves were found. He was able to distinguish seven dwelling-pits, three of which were excavated systematically. One was well-preserved. The dwelling-pits were about one metre deep, surface measurement about 15×12 m². The well preserved pit must have been left suddenly. The fragments of vessels lay partly in good order, and partly scattered over the whole floor. The larger vessels were cup-shaped, with bulging side-walls which narrowed towards the ground. There were also small half-round bowls. As decoration there was the same alternation between outside and inside indenting, also a number of comb-indentations which took the form of garlands, rhomboids, and other geometrical patterns. These decorations are assessed as a degenerated derivation from the local Karasuk pottery.

The find of milling-stones is important, also that of bone hemp swingles and small combs for vegetable fibres, which leave no doubt that, here, we have to do with an agricultural settlement. Bones of domestic and wild animals were plentiful, as well as fish bones.

Bronze finds could only be made singly. Iron was lacking.

A few kurgans could be reckoned to the culture appertaining to these dwelling-sites. Here, the finds made by Gulaev in 1912 should be mentioned first. He opened six kurgans at *Bolsherechenskoe*. There is no diary, and the inventories have been confused.¹⁾ Three kurgans probably belong to the 7th—10th centuries A. D., but the kurgans I, II, and III to our cultural phase. Griaznov has published three knives (Pl. III A: 5,6), two arrow-heads, and a buckle with a fixed spike (Pl. III A: 7), from these finds.

A supplement came about only in the year 1930 through Sergeev who excavated the kurgans near *Berezovka I* on the Katun, 40 km. from Biisk. Fourteen kurgans correspond with Gulaev's finds. Out of these fourteen, only one had been left untouched by grave-robbers.²⁾ Again it was a question of crouching skeletons, lying on the right side. By the heads of the dead were the remains of provisions for the journey into Eternity in the form of sheep's ribs or vertebrae. Pottery was lacking. In these fourteen graves there were found altogether only a bronze knife and a fragment of a second (Pl. III A: 2,3), also a piece of a horse's head at the end of a pole made out of antlers (Pl. III A: 9). Besides these, there were some rings of copper wire, some pendants, tubes of copper sheathing and a gold bead in the form of a ring of thin wire. In view of the fact of the notable existence of pottery in dwelling-sites of the same time, one must consider whether the lack of it in the graves should be due to a singular tradition which had manifested itself several times in earlier periods of Altai.

¹⁾ Griaznov 1947a, pp. 15—16.

²⁾ Two kurgans belonged to the next epoch and six were so completely pillaged that no determination was possible.

Finally, Griaznov excavated fifty-three graves of a burial-site near *Blizhnye IElbany*.¹⁾ Shallow graves contained crouched skeletons, lying on the right side, the head towards the south-west. They were very poorly equipped, but the great number of graves made possible a satisfactory survey. In three graves little cups were found, with rounded bottoms, and, at the head end, rather poor ornaments in bronze, in the form of wire rings and pendants. Only in the case of one girl was an interesting neckwear discovered, made out of bronze and paste discs and various beads and pendants, also a broken arrow-head of Early Scythian type, made into a pendant. Women had been given, besides simple ornaments and bronze needles, clay whorls and weaving combs. Among the men, two bronze spear-heads were found, also bone and bronze arrow-heads, a stone club, an antler-hammer, etc. In many graves there lay, obviously with the man's belt, the broken tip of a knife, or occasionally a tiny piece of something like this, and in one case, a pointed stone, which was plainly meant to serve the same symbolic purpose. Griaznov points to the close relation of this burial-site with that of Tomsk. He thinks that, here, we have to do with the same ethnic group as in Tomsk, which on the one hand differs fundamentally from the people of the Minusinsk Basin, and, on the other, from those of Altai itself. Several stray finds related to Tagar I. are attributed to this phase (Pl. III A: 1,4).

2. High Altai.

The actual Maiemiric Culture corresponds to these finds in the anterior. Griaznov ascribes all finds to it, which date later than the Karasuk graves, the characteristic point of separation being the appearance of the co-burial of horses. The Maiemiric is separated from later stages by the lack of iron, the shape of the bronze mirrors, and a particular kind of horse-bits.

Griaznov writes on this subject:²⁾ »In the Scythian time one can differentiate between two types of bridles in the whole breadth of the Steppe from the Yenisei to the Danube. In the first case the ends of the bits are stirrup-shaped (Pl. III B: 7, 8) and hang parallel to the cheek pieces, the psalia. The psalia belonging to them have three openings for the cheek-strap which is split into three branches. The middle strap goes through the bit-ring (Pl. III B: 1, 4, 5). In Siberia and Kazakhstan there are variations of this type, psalia with a little hook, or with a longer branch-rod at the side instead of the opening in the middle (Pl. III B: 2, 3, 6, 9, 10, 11). In this case the opening in the bit is put over the side-branch.

The second type of bridle has a bit with a ring at the end, which stands horizontally. The psalia have only two openings and are passed through this ring. The first type is characteristic of the Early Scythian kurgans on the Kuban and Dnieper, up to the 6th and the beginning of the 5th centuries B. C. at latest. The second appears in the same districts, but only from the 5th century B. C. on. The first type is to be considered as one of the fundamental signs which differentiate the inventory left by the Maiemiric epoch from that of the later one.»

By reason of this criterion Griaznov summarizes thus:³⁾ The kurgans and the so-called Treasure of the *Maiemiric Steppe* which was found through Adrianov's excavations at the upper reaches of the Naryn.⁴⁾

Here a chain of five kurgans stretched from north to south, two of these were opened

¹⁾ Griaznov 1949, p. 114.

²⁾ Griaznov 1947a, p. 10.

³⁾ Griaznov 1947a, pp. 9—10.

⁴⁾ Rudenko 1930, Kiselev 1949, p. 168 (here also older literature).

by Adrianov. Both had been robbed, one completely, but the other contained the skeletons of a fully grown man, and that of a young person, a bronze mirror (Pl. IV: 16), and sheep bones.

The treasure was brought to light, when Kiselev was digging in a circle of seven stones which lay about 3—400 m. from the kurgans. Kiselev considers the objects found here to be robbers' booty from the kurgans which had been hidden here, for further use. Among these objects are mentioned, especially, ten pieces of gold leaf with designs of an enrolled animal (Pl. IV: 15), which perhaps were meant to cover wooden discs, further gold strips, two bronze buttons, one like a cuff-link (Pl. IV: 17), the others covered with gold (Pl. IV: 14), and a buckle with a fixed spike.

In the same excavation season, three more kurgans were excavated, out of a similar chain near *Solonechnaia Belka* on the Bukhtarma. In the first was found at the bottom of a square trench which had obviously been covered with birchwood beams, the skeleton of a full-grown man. As gifts a bronze knife and the fragment of a sharpening stone appeared.

The second kurgan contained a horse's skeleton in anatomically perfect condition, with a bronze bit of the Maiemiric type between the teeth, also bronze buckles with fixed spikes, and bronze beads and buttons for the straps (Pl. IV: 11, 12). In the third kurgan there was no trench, but in the mound three skeletons were found. By a female skeleton lay a bronze needle, the terminal shaped like an animal (Pl. IV: 7). A mirror of Maiemiric type is also mentioned. This had a raised edge at the back, and a loop in the middle, as fastening. Also a horn tube (Pl. IV: 8), a sharpening stone (Pl. IV: 5), little beads of white paste or turquoise, and glass-beads shaped like cylinders were found.

Kiselev adds the fact that the mounds of these kurgans, differing from the following epoch, are not only of stone blocks but of mixed rocks and earth, so that these kurgans differ from the later ones in view of the thicker overgrowth. The size of the trench was usually 2:1.5 m., depth up to 2.5 m. In the south part of the trench stood a kind of chest about 85 cm. high, covered with thinnish wood. In this lay the dead man with his gifts. In the north part of the trench was a step at the height of the wooden chest, on which, judging by the remains, which were left over from the robbery, one or two horses were buried, heads towards the west. Kiselev emphasizes together with Rudenko, the appearance of a bronze knife with an animal-shaped terminal (Pl. IV: 4), a mirror with raised edge and a loop in the middle, and also one of a different shape with a handle at the side, and bronze and bone arrow-heads, some with tangs which correspond to the oldest Scythian types. Others find a parallel with the Sauromatic graves of the 5th century B. C. The bronze bits with the stirrup-like ends are like the Scythian ones of the 7th—6th century B. C. Boar-tusks bored through, were also present in these graves, as well as horn imitations. According to the result of other finds they belonged to the harness. Pseudo-buckles are often met with (Pl. IV: 18).

Griaznov¹⁾ reckons a grave which Sosnovskii²⁾ excavated, 1936, near *Ust'Kuima* on the Katun, to this period. It lay in a little kurgan among a group of Afanasievo burials. At the bottom of the grave which was laid out with stones, was a female skeleton. Among the gifts are mentioned a bronze knife (Pl. IV: 3), about thirty cylindric beads of white paste, and one bullet-shaped one of cornelian. Two and a half metres further was the skeleton of a horse, the skull of which lay by itself on a stone disc with three neck vertebrae, and thus had obviously been cut off while still in fresh condition. By the horse's skull were horn psalia.

¹⁾ Griaznov 1947a, p. 13.

²⁾ Sosnovskii 1941, p. 306.

Griaznov reckons the finds on the *Zmeinogorsk mines* (e. g. Pl. IV: 19) to this group. They have been lost in the meantime, but satisfactory drawings exist. Also two bridle-trappings from the Semipalatinsk Museum and numerous stray finds, including axes, daggers, knives, mirrors (Pl. IV: 1, 2, 6, 9, 10, 20, 21), and, finally, a helmet of early Scythian type (Pl. IV: 13), which Rabinovich declares to have been imported from the Kuban to the Irtysh. We shall have dealings with it later.¹⁾ The axe should merit further attention, but as there is only this one find, it is not possible to proceed further.

Let us now draw conclusions:

We see not one, but two groups. Both come from the local Karasuk cultures.

a) In the one complex, in the High Altai, the dead are laid on the grave with their warhorses, also with weapons and tools which were necessary for mounted warfare. Pottery has nearly disappeared. There is every sign that here we have to do with warlike nomads. Remains of dwelling-sites are accordingly missing. The peculiar shape of the bit as well as the strongly traditional forms of the remaining tools betray the fact that here it was a question of a local reaction on the part of the native tribes. This group possesses its own special Animal Style which we find otherwise in the purest form in the territory of the Sauromatae.

b) In the other complex, in the anterior, there is, on the contrary, a certain degeneration, signs of growing poverty in every line of existence. Alongside this, agriculture and a tendency to settle are preserved and supplemented by intensive hunting of furred animals.

Griaznov thinks these signs are to be traced back to the influence of the bearers of that first complex, who, in between, became mounted nomads. They plundered their neighbours and made them dependent — thus the degeneration. They needed grain, because they no longer went in for cultivation themselves — thus the continued existence of agriculture among the dependent tribes. Finally, they organised fur-trading (as in Scythia) — thus the intensification of hunting.

Griaznov sees an example in this of the splitting up of a complicated culture into land-workers on the one hand and cattle-breeding nomads on the other. Engels claimed a development of this kind as a law of Economy. Perhaps that is why Griaznov does not inquire further about the initiators of this change.

So far, we can make only vague assumptions about these initiators. All peoples come a priori into consideration, among whom such a change can be observed as having taken place earlier, that is primarily the peoples of the Caucasus and Luristan. Yet happenings in Europe (where a tremendous expansion of the Urn-Field Cultures become visible) and in the territories bordering on the Chou Empire should not remain unnoticed.

The Caucasus and Luristan centres seem to me, for the moment, the most important, e. g. because Kiselev found Caucasian bits among Mongolian bronzes, and several of the East-West parallels observed by Janse started obviously from common centres in the belt of mountains.

I should like now to go further than the results of the Russian research, regarding several points:

a) The observations in Altai make it very probable that Bernshtam took the right line in the Pamirs and in the anterior of T'ien-shan when he worked out a complex here, with «Scythian» culture and early Animal Style.

b) These two groups, Altai and the T'ien-shan territory, which grew up upon the basis of western Karasuk Culture, possess, alone among all archaeological complexes of the

¹⁾ Rabinovich 1941, pp. 113—114.

Asiatic Steppes, the qualities which we demand for the ancestors of the Nomad Scythians and Sauromatae, i. e. Europoid racial type, great age, and the lack of all evidence that they first came into the country with an immigration belonging to Scythian times.¹⁾

c) It is therefore possible that the nomadic kernel of the Scythians and Sauromatae (perhaps even of the Ananino Culture) developed in the territories of the western Karasuk province. The name «Scythian» clings to these territories throughout the whole of antiquity.

d) Within this relationship between East and West, Altai and the Sauromatic territory stand particularly close together.²⁾

e) Such a close tie is not to be found between the Pontic Scythian element and any eastern district. This might, on the one hand, be accounted for by the inadequate exploration of that vast stretch of country, in which Karasuk-like forms were native, yet, on the other hand, by the fact that the Pontic Scythians had a much more variegated past behind them, before they settled down into their new home. Their knowledge of iron, and the strong elements of Oriental art, which are lacking in the Sauromatic complex, could only have been obtained during their campaigns in the Near East.

f) If the Scythian tribes were formed within the framework of the western Karasuk province, then it is possible that they undertook similar campaigns towards the East, that is to say, to China³⁾ (before they invaded the Near East), and, from here brought artistic ideas away with them (maybe in the form of kidnapped handworkers). Only recently has an article been written, concerning the so often puzzling, yet so long known affinities between Scythian and Chinese art.⁴⁾

We must then expect to meet with objects in the oldest kurgans, which one can look upon as «souvenirs» of such a visit. We do this, especially, in the Kuban group. Most important evidence is shown by the pole-tops, the eastern origin of which (Ordos) can hardly be doubted, as we now possess a modern summary.⁵⁾

In addition, Kiselev reported a surprisingly large number of Scythian cauldrons from the collections in Northern Mongolia.⁶⁾ The form of the handles is undoubtedly dependent on Chinese examples which go back to the Shang time. Casting in one piece is an East Asiatic speciality. The local cauldrons of Kazakhstan are made of plates joined together. All these Far Eastern elements have been pointed out by Rostovtzeff.

I should like to supplement this with one point:

Rabinovich⁷⁾ confirms that the oldest Scythian helmets are not of Greek origin. They are restricted to the oldest kurgans of the Kuban group, and cannot be derived from an Anterior Asiatic or European helmet. Matsunaga⁸⁾ denotes a group of North Chinese

¹⁾ And, if Kiselev is right in his «attribution of an Animal Style to the Karasuk of Semirechia», perhaps also an Animal Style which has a local tradition, and does not come into the country as an invader.

²⁾ See Rostovtzeff 1931, pp. 483 and 484.

³⁾ The distance is not greater than to South Russia, and the way is sketched through old cultural connections.

⁴⁾ Frisch 1949.

If Kiselev is wrong and the Karasuk province of Semirechia had no Animal Style, it could be assumed that Animal Style was developed by contact with the Chinese borderland.

⁵⁾ Shleev 1950. The author himself, however, comes to another conclusion, which can surely not be maintained.

⁶⁾ Kiselev 1947c, pp. 365—366.

⁷⁾ Rabinovich 1941, pp. 105—119.

⁸⁾ Matsunaga 1934. I have to thank Dr. Slawik for calling my attention to this material and for the translation from the Japanese text.

helmets of Ordos type as «Scythian» in the widest sense (e. g. Pl. V: 2). He brings in the Solokha helmet as an object for comparison, but in this, the helmets of Kelermess (1 and 2) (Pl. V: 1) and, further, those of Staryi Pecheur (Pl. V: 3) and several other finds of not precisely known origin show much more typical agreement, namely a singular ring on the top, by which the helmet could be hung up.

One cannot overlook the differences. The Scythian and the Ordos helmets belong only to the same group of forms. This group, however, (namely, casting at such a late time) comes rather from Eastern Asia than from Europe where these helmets concentrate round one point, the Kuban group, and then disappear without successors.

It seems that the classification of Ordos helmets as «Scythian» is problematic. Perhaps, the other way round, Scythian helmets are a singular further development of a type which is Chinese in the broadest sense of the term.

In this situation we must ask ourselves, if it is really out of the question whether the name of the Scythians appears in Chinese sources¹⁾, and whether the bloodthirsty burial-customs of the oldest Scythian kurgans are really something nomadic and not much more likely to be something taken over from princely Chinese burial-rites.²⁾

Ebert has separated the Kuban group from the other kurgans and attributed it to some of the Eastern Nomads. Perhaps there is a kernel of truth in this. Their founders were far more reminiscent of East Asia than the founders of the others.

Naturally all this is only a hypothesis which must be compared with other theories and divergent facts³⁾. I only intend to show the possibilities resulting from the study of the «Karasuk Cultures» regarding the explanation of Scythian Animal Style.

VI. PAZYRYK PERIOD.

During the Maemiric Period equestrian nomads or semi-nomads had been formed, in the steppe-belt, which were aggressive, quick to strike, and no longer autarchic, and thus, according to their whole construction, were prepared for political agility. Among these only a few conservative blocks of agriculturists and cattle-breeders were left, who took no part in this aggressive development.

From this it is clear, that the time which followed is determined by the history of the quarrels which these mounted groups fought out, first with their more highly organized neighbours, and then, naturally, among themselves. The decisive difference in the circumstances of the eastern and western Steppe peoples depended upon the fact that the peoples in the East except for a few weaker neighbouring countries, e. g. Korea, had to do with the Chinese Empire exclusively, which in the very next centuries, was approaching the height of its cultural and military development. Thus the whole political, social and military development of the East reverts to one factor.

In the Europoid West, there existed no such permanent foe. Violent quarrels had taken place over a limited period (in the 6th century B. C.) between the Persian Empire and its Nomadic neighbours in the North, but a long period of peace is included in this time, which finds its expression in the fact that Sakian and Massagetian auxiliary troops could be counted among the most reliable warriors of the Achaemenids. The Oxus Treasure,

¹⁾ Haloun 1937, p. 316.

²⁾ Minns (1942) confirms Chinese elements in the Scythian Animal Style. He is, however, convinced that the Scythians never originated in China. In this, he is right. Perhaps the Scythians were in China, once upon a time. Maybe the end of the West Chou Empire (about 780 B. C.) marks the beginning of the Scythian Animal Style.

³⁾ Cf. Eding 1940, Hančar 1950.

with its numerous Persian Empire and Near East relations, is an exact symbol of this close and long-lasting contact.

The shock came, when the Greek conqueror removed the political basis of the mutual relationship. The natural flow of mercenaries was stopped, and the basis for a different and warlike expansion was formed. Therefore, the pressure by the Steppe population could have a still stronger effect, because, as Tolstov has so ingeniously worked it out, the heavy armour was developed by the collaboration of nomads and manual workers in the cities, which made possible the transition from fighting with bows and arrows from a distance, to «push-tactics» carried out by mounted lancers in close formation. This led to an expansion effected by various tribe groups going one after the other in quick succession, in various directions: Once to South Russia, where the Sarmatians relieved the Scythians of their position as rulers in the Steppes, then East of the Caspian into the former territory of the Persian Empire, in connection with the frontier inhabitants of this territory, as «Parthian Storm», and lastly, East of these, as «Sakian Migration», to East Persia and finally to India.

The liquidation of the Graeco-Bactrian Empire accompanied the movement towards East Persia, and, in this, the leadership may have been in the hands of tribes which wandered to the West out of the Chinese borderland already under pressure from the Huns.

In the face of these manifold and very complicated movements, more complicated than one can state in a short survey, the unity of China, which was just being formed, caused the unity of the nomads in the East.

Although the facts are so well known by Chinese sources, and the reasons are so easy to understand, it is yet very difficult to grasp the centres and the creators of this unity, from our archaeological material. The fact that scientific excavations exist, unfortunately, only in Transbaikalia and in Northern Mongolia may play an important part in this. The Ordos region and Manchuria, which are perhaps much more important centres, have not been clarified by systematic examination.

Regarding *Northern Mongolia* and *Transbaikalia*, we know that the first phase of Stone Tombs was replaced, in the 4th and 3rd centuries B. C., by two other groups, which run partly parallel to each other, i. e. by the so-called Stone Tombs II and the «Figure Graves». Their metal inventory always goes back into the Karasuk Culture. The anthropological type is well known. They are Mongoloid with a well-rounded brachycephalic skull (Pl. XIII: 2). We do not know from archaeology what was happening in the *Ordos territory* at the same time. We have reason to assume that the old Tibetoid Karasuk people were no longer dominating here. Among the stray finds a group can be recognized, which shows a fairly strong relationship with the West, but there are also others which perhaps connect up with the Mongoloid groups of the North.

A fact of exceptional importance is that, about the beginning of the 1st century B. C., we meet with a new and complete group in Northern Mongolia and Transbaikalia, that of Noin Ula¹⁾, that is to say, princely burials and some much simpler cemeteries, belonging to them, which, however, shows import goods which are essentially the same. First it was thought that the Noin Ula group represented a logical continuation of the Stone Tombs, only modified by an overwhelming increase in luxury, which was made possible by the Hun successes. We know now that this is not correct. The predominating skull type of the Noin Ula group is also Mongoloid, yet dolichocephalic. The people of the Noin Ula group were not like their forerunners in Transbaikalia, but like the Bronze Period population of Cisbaikalia and the Tungus of the present day in the same territory. In the burial customs also, and in art (e. g. in the prominent position of the elk)

¹⁾ Teploukhov 1925, Borovka 1925, Trever 1932, Sosnovskii 1934, 1935, 1940, 1941, 1946, 1947.

characteristics are found, which point back to the Northern forest zone.¹⁾ Debets has, therefore, assumed that the Hiung-nu, or at least their «royal stock», were a Taiga group²⁾ who, with all the advantages of such, broke into the Steppe and, there, assumed domination over the former «Stone Tombs» population.³⁾

Meanwhile, through the dating of the latest Stone Tombs, and the earliest Noin Ula cemeteries, it has become clear that things here become still more complicated. Today we must say that, if such a North-South movement existed, it took place somewhere else, presumably East of Transbaikalia, and was first carried out, in a roundabout way, in Transbaikalia also. In other words: The Noin Ula group was in any case not the formation-centre of the Huns. It could have been a side-branch of the Huns or another forest group, which moved towards the South within the framework of the Hun Empire. Or, perhaps, the dating of the earliest Noin Ula burial-sites is incorrect.

Thus we must leave the whole problem of the Huns in the air, which is understandable, as extremely large territories have, still, not been examined. We must, therefore, be content with the proof that it is dangerous to take the Noin Ula group as representative of the Hunnic expansion, as, for example Sosnovskii and Debets⁴⁾ did (and the West, glad to receive a starting point, followed them).

Let us now go over to the quarrels which came to a head among the Steppe peoples themselves. These quarrels and fights are extraordinarily important as regards Altai in particular, as, thanks to its situation, it found itself in an intermediate zone, which came into direct contact neither with China nor with the Near East. Naturally, the extensive movements inside the steppe-belt are more difficult to grasp than those between the steppe peoples and their history-writing neighbours.

The most important quarrels were now carried on between the peoples of the eastern and those of the western part of the steppes, in a whole set of warlike advances and migrations.

Tolstov tried to work out such a migration.⁵⁾ He claims that just as the heavy armour of the lancers was brought to the South by the campaigns of peoples (Parthians and Sarmatians), this same form of armour reached East Asia borne by a great invasion. The Great Yüeh-chih of East Asia were, according to him, no other than the «Great Getae», the «Massagetae», who, as far back as the 4th century B. C. may have dominated the whole of Southern Mongolia. Defeated by the Huns, they returned (according to Tolstov's theory) to their old hunting grounds, and in doing this, liquidated the Graeco-Bactrian Empire.

This theory sounds wonderful. But Tolstov does not even try to compile all the material which we have to hand from Western and Eastern sources, and makes no mention at all of the many and divergent explanations which European students have offered in the course of the last few decades. This is easy to understand, if one considers how many and divergent theories are still in the air, concerning this difficult matter. But by the omission of so much previously obtained knowledge, Tolstov robs his theory of all force of conviction.

¹⁾ Cf. Okladnikov's Lena-finds. He found pottery which resembled the Noin Ula group together with Tungoid skeletons. See Debets 1948, p. 123.

²⁾ Debets 1948, pp. 119—123.

³⁾ That would be a parallel to later happenings, when hunter-groups of the Taiga repeatedly showed themselves as the tougher, and thus were called to domination, as the «Secret History of the Mongols» describes so plastically.

⁴⁾ Sosnovskii 1941, pp. 308—309. Debets 1948, pp. 185—190.

⁵⁾ Tolstov 1948a, pp. 140—154.

It is clear, therefore, that Tolstov's opinion is not even accepted by all specialists in Soviet Russia.

Bernshtam wants¹⁾ to show, in opposition to this, that it were the descendants of ancient Sakas (not Sarmatae and Massagetae), who played the leading part in the steppes. Bernshtam believes that they extended to the West and to the East, and thus brought the forms to the West and the East, which up to now have been called «Sarmatian». This theory would rather agree with the archaeological facts than Tolstov's.

In any case, we know of the Chinese and Western sources that the great time of Sakian or Sarmatian peoples was followed by the supremacy of the Huns. They created a new Hunnic centre in the Balkash region and dominated the western steppes as far as the Urals and the Volga. In all these regions they mingled with the local Iranian tribes, thus given existence to new mixed peoples, perhaps to European Huns and to Ephthalites.

But all this is well known.

Bernshtam²⁾ thinks he can confirm traces of these Western Huns in a necropolis which he excavated in 1939, near Kenkol'. It belongs to a Mongoloid group with skull deformation, without Animal Style (in this widely differing from Noin Ula), and with many Chinese import goods.

This theory was generally accepted, just as other related burial-sites have been found.

In the last year, an important critic has raised his voice against this effort. Smirnov³⁾ points out, that a group like that of Kenkol' was present in Sarmatia as early as the 3rd century B. C. It was a Far Eastern group, but not identical with the «Huns» of whom we know, so far, from East Asia.⁴⁾ Thus, up to now, we are not very successful in our archaeological identification of the Huns.

Let us turn back to the monuments of *Altai*, now.

The first attempt at classification and grouping was undertaken by Griaznov. He considered⁵⁾ the Pazyryk Kurgan I, which shows no sign of foreign importations, as typical of the 5th—3rd centuries, but regards the Shibe Kurgan as typical of the following period (2nd century B. C.—2nd century A. D.), and, accordingly, makes a distinction between a Pazyryk and a Shibinsk Period of Altai.

He conceived the Mongoloid skeleton in the Shibe Kurgan as a proof that the Huns had, at that time, drawn Altai into the territory which lay in their hands. His system has the advantage that one finds in it, again, the traditional chronological differentiation, made between the Scythian and Sarmatian Periods, just as one finds the traditional idea of the political development of Central Asia in it.

Rudenko has taken this idea as a basis for the interpretation of his excavations. He goes further than Griaznov, and puts the Pazyryk Kurgan II into the 5th, at latest the 4th century B. C.⁶⁾ To support this dating, he looked out, with the greatest possible industry, all indices which point to an especially close relationship with Achaemenidic Persia.

¹⁾ Bernshtam 1947e, 1949b.

²⁾ Bernshtam 1940a, 1947a, 1947b, 1949b.

³⁾ Smirnov 1950.

⁴⁾ Maenchen-Helfen (1945) has rejected the identification of European and Asiatic Huns, showing that there were not much affinities between Ordos and Noin Ula, on the one side, and the European complex called Hunnic on the other. It is, however, necessary to compare Central Asiatic and European «Huns». I think they were related.

⁵⁾ According to Debets 1948, p. 136.

⁶⁾ A similar discussion about the dating of Sarmatian and Scythian designs see Salmony 1937.

This dating would result in the fact that we could trace back many elements so far described as Sarmatian, to an original source in Altai.

Unfortunately, Rudenko has not explained the appearance of several objects from the Pazyryk Kurgans II.—VI. in later complexes of the neighbouring territories, or has not even mentioned them.¹⁾ If we put together the objects which do not fit into Rudenko's picture, we must then come to the conclusion that the Pazyryk Kurgans I. and II. cannot be separated from the other great kurgans²⁾ which include the Shibe Kurgan. The difference in time can only be a minimum. As regards anthropology, there is no considerable difference. In Pazyryk Kurgan II lies a man of Manchurian-Tungus type, and in the Shibe Kurgan we meet a member of the same racial division.

Thus, following Griaznov's arrangement of material, we would come across the paradox result that the whole of the Pazyryk Kurgans belong to the Shibinsk Period. This not only upsets Rudenko's dates, but makes it impossible to use the arrangement advocated by Griaznov.

* Therefore I have followed Kiselev,³⁾ who summarizes the whole period from the end of the Maiemiric time, right into the 1st century A. D. into a large group, the Pazyryk Period. This combination seems all the more correct, because, in it, it is shown that in Central Asia no breach can be confirmed, acute enough to be compared with the Scythian/Sarmatian change in the East European Steppe. In Central Asia, many Scythian features exist up to the time about the birth of Christ.⁴⁾ The change of culture progresses gradually, and without breach, and even the expansion of power of the Hun Empire, only finished off a process which had begun long ago. Kiselev's arrangement of the material corresponds much more nearly with that which was applied to the Sarmatian monuments of Kazakhstan (Maiemiric: Sauromatian, Pazyryk: Sarmatian I, II, III). Naturally, inside such a large unit, as the Pazyryk time represents, one can distinguish a whole number of sub-groups according to territory, social position, and time.

The Altai anterior forms a little world on its own. However, the difference from the mounted nomads of the mountains, which we saw so clearly in the Maiemiric time, lessens and disappears, in the course of the period. Perhaps the original plundering of the tribes settled there by mounted nomads had really become a symbiosis, as Griaznov presumes. Griaznov was able to distinguish later and older monuments here (just because we know of dwelling-sites) and named them according to the districts where the main finds were discovered. I have combined the facts according to this.

In High Altai the situation is much more difficult. Dwelling sites are missing (as is to be expected), and the kurgans can, by means of the number of horses, be divided into three groups, which presumably represent the princes, the nobility, and the free people. A sign of schematism is recognizable, as if there had been exclusive castes. Sometimes one feels oneself reminded of Chinese conditions, in which every group of clerical officials received a different form of burial.⁵⁾ As perishable stuffs are preserved in those great kurgans which lie in the high mountains, yet so much is missing owing to robberies, which we find in the smaller kurgans, we can perhaps achieve some order in the smaller kurgans, and even arrange the greater ones in a chain, according to time, but it is

¹⁾ This criticism concerning Rudenko in no way refers to the punctiliousness and high quality of his outstanding excavation work. Cf. also Rostovtzeff's unlimited appreciation (Rostovtzeff 1931, p. 587).

²⁾ Kiselev 1951, pp. 289—291.

³⁾ First published by Kiselev 1947b.

⁴⁾ Such survivals led Rudenko to his dating which is much too early.

⁵⁾ Spiegel 1933, p. 66.

difficult to synchronize the chains. Therefore, Kiselev has not gone far in the setting up of such parallels. The dating is also difficult, because the great kurgans show signs of great antiquity of ritual, and, because the suspicion exists, that the builders of the various kurgan groups had, simultaneously, very varied forms of favourable trade-contacts with abroad. Thus, lack of imported goods does not necessarily mean great age. In other words, it is still too early, to transmit too fine a division into the Pazyryk Period. Thus I have restricted myself to repeating here the arrangement which Kiselev thought out,¹⁾ and to mentioning particularly conspicuous cross-relationships. Only at one point does my combination deviate from Kiselev's, i. e. the Tuiakhtha Kurgans, and Vavilonka, which Kiselev reckons as belonging to the Maiemiric Period, which, however, possess a later form of psalia, mirrors, and especially, iron — these I have included as a group which leads further towards the various socially differentiated groups of the High Altai, in the Pazyryk Period.

1. Biisk and Berezovsk Culture of Anterior Altai.

Griaznov has treated and presented the material of the Altai anterior in a summarized and shortened form.²⁾ Thus he could start from the results of the excavations which he began in 1946 in the hilly country of *Blizhnie IElbany* between Biisk and Barnaul on the Ob. He found there remains of settlements which had been disturbed by winds, yet which yielded enough pottery finds to allow for an exact dating, i. e. between 5th and 3rd century B. C. The find of cast forms and copper drops was particularly interesting, as it showed the existence of foundries.

Similar material consisting of sherds was also discovered at further range. Vessels were dug up, out of destroyed burial-sites. This pottery had much in common with the old Bolsherechensk. A belt of parallel lines, or slanting network, which encircles the vessel, is new to us, or the impresses of a little shovel, which were introduced in between the bendings or the edge.

The most interesting collection of pottery up till now came from the town of *Biisk*. Thus Griaznov summarized it as »Biisk Culture». He shows that a number of other finds belong to this: *IEniseiskoe II*, *Monastyr* near Biisk, *Kamyshenka I*, a site near the town of *Kuznetsk*, and, finally, the gorodishche *Chertova*.

Beginning with the same excavation season, at *Blizhnie IElbany*, Griaznov was able to differentiate from this Biisk Culture other forms peculiar to the 2nd and 1st centuries B. C. This determination of the time was particularly clear at one point, where the layer of this phase stratifies the dwelling-pits of the older Bolsherechensk Culture (6th—5th century B. C.). The pottery has not changed, in comparison with the form of the Biisk Culture, but the ornamentation is much simplified. The vessels are decorated only with rows of humps filled in, between, with grooves or little slanting lines. Plenty of vessels are, however, quite undecorated,

In *Blizhnie IElbany*, graves of this time were confirmed. The dead were buried in deep trenches in wooden chests which were covered by means of several tree trunks at the top. A burial ritual is carried out here, which goes back, in High Altai, to a much older time, right into the Maiemiric Culture. The skeletons lie stretched out on the back, the head orientated towards the west. The graves became much richer in comparison with those

¹⁾ Kiselev dates all the great Kurgans in the 3rd—1st centuries B. C. Pazyryk Kurgan I. may be one the most ancient. We cannot say more before Rudenko's excavations are completely published. Why did the Russians not examine the annual-rings of the great tree trunks used for the construction? Thus we should have a relative date.

²⁾ Griaznov 1947b and 1949.

of older stages. Remains of clothing and copper, iron and bone ornaments were constantly found. Iron knives with a ring at the end were also given to the dead. One or two clay vessels belonged to each grave, evidently with liquid nourishment, and the fatty tail of a lamb.

Pottery of this kind was already known, through stray finds, from *Klepikovo*, *Viatkina*, *I Eniseiskoe I*, and near the *Vikhorevsk* ferry, not far from the town of Biisk, but especially through the excavations of Sergeev in the gorodishche *Berezovka*. Griaznov calls the whole phase »Berezovsk Culture«, and lays considerable value on the fact that during this period are found, on the one hand, signs of transition to the culture of High Altai, on the other hand, significant signs of enrichment, in comparison with the former phases. Griaznov believes there is a connection between these two. The settled, land workers had perhaps now found a complete *modus vivendi* with the nomads. The collaboration may have consolidated itself and thus led to a general economic uptrend.

So we find, also among the kurgan finds of this phase, next to a group which corresponded purely to the settlements mentioned (*Klepikovo*, *Blizhnie I Elbany*, already mentioned, *Srostki II*, and a great part of the *Biisk* burials), another which clearly represents a transition to the rider graves of High Altai. As such, the burial-sites of *Bystrianskoe* and *Krasnyi I Ar* are specially to be considered.

Kiselev has now made more detailed statements about some of these kurgan groups. Regarding the burials which came to light during the building of a silo in the town of Biisk¹⁾, he emphasizes that vessels painted with yellow ochre were found. The patterns represented wavy bands and spirals. As no more painting of vessels could be established in Altai since the Afanasievo time, this is an isolated appearance of great importance. It is all the more significant, as Sergeev and Markov found broken copper sheathings in the wall of the silo trench, decorated with drawings. They represent the same scenes which we know from the felt carpets of Noin Ula, namely a cervid breaking down while running, and fallen upon by a fantastic griffin. In this, the carvings in the representation correspond with the appliques which give to the Noin Ula carpets their many-coloured impression.

In these burials some eastern element has probably had an influence, from a region where vessel-painting existed, i. e. from outside the territory which one surveys with the help of the Russian excavations.

Kiselev also gives information about the excavations which Sergeev undertook in 1930 in the large burial-site of *Bystrianskoe*.²⁾ Here he opened kurgans in whose stone chests chiefly single burials were found, with the heads towards the west. They had a rich inventory with them, vessels with decoration of applied clay bands, spinning whorls, iron knives, needles and fragments of mirrors, ear-rings of gold wire, neck ornaments, put together from golden pendants, cowrie shells and bronze beads, glass and stone in various shapes and colours. The find of a milling-stone is especially interesting, also a square stone disc deepening in the middle, which Kiselev, probably rightly, declares to be a primitive form of the stone incense altars of the Pazyryk time.

In 1935 further excavations were undertaken by the Sayan-Altai Expedition. The find material which came to hand simply provided confirmation of the picture obtained in 1930.³⁾

By reason of this material Kiselev established the facts that:

1. The ear-pendants of gold wire conform to those from the »Hun burial-site of Derestui« in Transbaikalia, about the time of the birth of Christ,⁴⁾ yet also to the Late

¹⁾ Kiselev 1949, p. 180.

²⁾ Kiselev 1949, pp. 179 and 180.

³⁾ Kiselev 1949, p. 179.

⁴⁾ Sosnovskii 1935.

Tagar ones of the Minusinsk Basin. They are also found in the »Usun culture» of Semirechia.

2. The various beads correspond with those of the Late Tagar kurgans.

3. The pottery shows vessels, which correspond with the Tagar ones, also others which are related to the Sarmatian ones of the South Uralic kurgans, and singular types, which we can consider as characteristic of the Pazyryk time.

Other kurgans of the same burial-site belong to the »transition» group.¹⁾ They differ outwardly from those mentioned before. They are covered with a stone layer. Again, in spite of robbery (the great mass of the graves mentioned before were plundered), they contained very many gold ornaments, hollow half bullet-shaped metal objects, rings, gold beads, typical of the Later Tagar graves of the 2nd and 1st centuries B. C. Kurgan Nr. 8 contained a rich find, namely many arrow-heads, among which the older bronze socketed arrow-heads and also the later ones, with tangs, were represented. It is impossible to overlook their close relation to the Sarmatian finds of the 3rd century B. C. Daggers and battle-axes are again the same shape as in Minusinsk Basin. In spite of these older types, the pottery leaves no doubt that the date of these kurgans can be considered as Later Pazyryk Period. Among the kurgans of High Altai the closest relationship to the Aragal Kurgan seems to exist, and it includes much which is Tagaric.

To the oldest finds of this transition group belong the little earth kurgans which Griaznov opened near the town of *Biisk*.²⁾ It is typical of this transition group that it approaches very closely, as regards shapes, to the kurgans already represented, but it contains also graves with horses. In their inventory we find barrel-shaped vessels of Eastern Sarmatian type, three-edged bone arrow-heads, iron knives, bone buckles with fixed spike, iron bits and horn psalia which are pointed on one side, bronze representations of boar tusks, as in the Kurai group and Pazyryk. These also belonged to harness. Little bronze objects in the form of petals with convoluted carvings, show complete agreement with finds in the great Berezovka Kurgans on the Katun river. As these belong to the 4th century B. C., this means that this Biisk group is relatively early.

Only one contribution from Sergeev himself has been published, which is easy to obtain. He treats of the excavation of a kurgan near *Krasnyi IAr*, one kilometre from the village of Krasnoiarskoe on the Kamenka.³⁾ This kurgan had, like most of the group, a stone covering, and had been thoroughly plundered. As far as we can see, the dead lay in a wooden chest, and outside its northern wall lay the horse. This order speaks for the fact that here we have to do with the usual west orientation. On the dead, only a clay button was found. From other finds, Sergeev deduces that it was used to hold the clothing together at the breast. The grave-robbers took no notice of the co-burial of the horse, as it yielded no valuable metal. Hollow, ribbed bone tubes were found here, sometimes bored through. They certainly served to fix straps and strap crossings. A very beautifully carved boar head bored through in cross form probably served the same purpose. A second example was completely destroyed. A boar tusk which had been formed into a griffin head also belonged to the harness. At the horse's head lay the S-shaped bone psalia finished off at the end with a singular stylized griffin-head. The bit was probably of iron, as some traces of rust could be seen. Sergeev mentions the appearance of similar, but undecorated psalia, near the village of Srostki and the Piket mountain. According to all these details, this burial forms an immediate transition to the Tuiakhta group of High Altai.

¹⁾ Also excavated by Sergeev, 1930, described by Kiselev 1949, p. 181.

²⁾ Described by Griaznov 1930b, Figs. 71, 73, 76, 78, 82, 84, 88, 91—93, and Kiselev 1949, p. 180.

³⁾ Sergeev 1946.

2. Tuiakhta Group.

The four kurgans near the village of *Tuiakhta* on the Ursul¹⁾ belong to a group which is conspicuous for its shallow round tumuli, 70 cm. high and 12 m. through. They are constructed out of large stone (30—40 kg. in weight), but with plenty of earth throughout. Thus they are overgrown, like the Maiemiric ones, and, in this, are different from the later ones. All have been plundered.

Under the mounds lay trenches lengthwise east to west, about 2.5 m. long, 2 m. wide, and 3.5 m. deep. At Kurgans Nr. 6 and Nr. 8, the ground on the south side is deepened. There were found the remains of a chest of larchwood standing in the pit which was so thickly covered with larchbark that it came to a level with the shallower end of the grave. In this shallower north part lay the skeleton of a horse, with the tail towards the west, again in accordance with the Maiemiric ritual.

In Kurgans Nr. 10 and Nr. 11, the floor of the trench was level. In Kurgan Nr. 11 stood a block-construction, as once in the southern part of the graves, but in such a way that a space between remained not only on the north side, but also on the west side. There horses were found. The horse on the northern side lay, as in the first kurgans, with the tail towards the west, the one on the west side, with the tail towards the south. In Kurgan Nr. 10 the block-construction filled up the whole breadth of the trench, and only a narrow space by the west wall remained free. Here lay the horse, with the tail towards the south. Owing to the addition of great stone blocks all round the wooden chest, the Nr. 10 and Nr. 11 burials were more complicated.

In spite of these differences, the inventory was about the same in all four graves, as far as one could judge, in view of the plundering.

Only in Kurgan Nr. 6 was the skeleton sufficiently preserved. It lay in a crouching position on the right side, with the head to the east, as once in the Bronze Period, but the skull revealed a striking change. Debets²⁾ writes about it: «It is like the skulls of the (modern) Kazakhians, and establishes a definite proof that, already at this time, single representatives of tribes of south-eastern origin penetrated into Altai.» We have, here to do with the first Mongoloids.

Among the gifts in those graves, the remains of two iron swords were found. They both have the wing-shaped hilt-basis of the Scythian akinakes (Pl. VI: 12). The pommel of one is reminiscent of the cross-daggers of the Minusinsk Basin, but the end of the other seems to be formed out of two griffins' heads, or perhaps the claws of a bird of prey. The considerable damage done by rust unfortunately does not allow the shape of these weapons to be reconstructed. Kiselev thinks he can say that these weapons are not like the light, elegant, Tagar daggers, but more similar to the heavy akinakes types of the Persepolis reliefs.³⁾

In Kurgan Nr. 11, a huge ferrule was found, within the rest of a handle. This obviously belonged to a battle-axe. The form of the ferrule, according to Kiselev, corresponds with the oldest Tagar types.

Bronze arrow-heads were found in two kurgans, in Kurgan Nr. 6 these were among the remains of a leather quiver, which lay at the left knee of the skeleton. It was apparently carried thus, as we know from Scythian representations. All six arrow-heads were three-edged and socketed. The sides were flat and slightly rounded over the points. At the base there were deep cuts (Pl. VI: 13). Such arrow-heads are extremely rare in

¹⁾ Kiselev 1938, p. 237, 1947b, p. 157, and 1949, pp. 170—172.

²⁾ Debets 1948, p. 137.

³⁾ Cf. the representation by Herzfeld 1941, Pl. XLI.

Siberian finds. Kiselev knows of only one specimen found by Rau in the lower Volga district.

Two arrow-heads from Kurgan Nr. 11 are similar but narrowed in the middle. It is of importance that Scythian arrow-heads, which at least show certain analogies, are dated 5th—3rd century B. C. The types of the 5th century are the most similar.

Also there are bone arrowheads of a type widely extensive, as regards both time and locality.

Several small bronze objects seem to have belonged to the belt (Pl. VI: 4,8). An iron hook served perhaps for the fastening of the sword. We know of bronze hooks, which served the same purpose. They are not decorated in any way. At the belt hung, presumably, needle-like bronze pendants (Pl. VI: 7). As they also appear many centuries later, in the Kudyrge Kurgan,¹⁾ they seem to have a long tradition in Altai. They show to us, how the bronze ornaments of the same type so frequently found in among the Ordos finds, were used.

In the same connection, a glass bead is of importance. It was found in Kurgan Nr. 6. It has a cream-coloured ground and blue «eyes», surrounded by white circles (Pl. VI: 14). According to the accompanying (poor) drawing, the bead belongs to the same type over which Seligman and Beck²⁾ report from Lo-yang. Thus, there is evidence of a far-reaching trade between West and East. The time of its appearance in China is in accordance with the timing which we obtained from the rest of the inventory.

In the same kurgan, eleven bored-through cowrie shells were found together, as if they had been in the form of a chain (Pl. VI: 15). They belong to the paste imitations of such shells, which appear in the Tagar graves of the IInd stage. Such imitations were produced in China at the same time, and served as a substitute for money.³⁾ Corresponding finds in the Volga region hint at how far these connections may reach.

There are four horse bits of iron. They correspond with the Scythian type which was usual, from the 6th century B. C., on. The psalia are straight. They are put through the rings on the ends of the bits. They have two openings for the cheek straps. One bit only is made of bronze. To this belong integral-shaped psalia like the Scythian psalia of the 5th century B. C. The strap crossings were fastened and ornamented with boar tusks (Pl. VI: 1). The bronze bit is so well preserved that it is possible to make a complete reconstruction of the bridle (Pl. VI: 16). On the nose, the horse wore a bronze button with four openings, in which the nose-strap and a strap leading down from the forehead crossed (Pl. VI: 5,6). This button corresponds in its function with the crossed tubes which have already been frequently described.⁴⁾ In one place, instead of such a button, there was a bronze copy of a carved boar's tusk. As in the original tusks, the broad end was changed into the open mouth of a beast of prey (Pl. VI: 2). We find nearly-related forms in the Minusinsk district, also in the Sarmatian kurgans of the end of the 5th century B. C. Such representations are otherwise lacking in Siberia, and hint at a close connection between the three districts, whereby it is to be noted that unornamented tusks were used very much in the Maiemic kurgans, and thus represent the preliminary step to the later artistic shape. It is possible that this use of tusks started in Altai. Bone buckles can be mentioned as part of horses' harness, and had either no spike (Pl. VI: 10) or a fixed one (Pl. VI: 11). Various small bone objects (Pl. VI: 3,9) belonged also to the harness.

The nearest parallels to the one vessel of which pieces were found, exist in Tagar pottery.

¹⁾ Rudenko and Glikhov 1926, p. 46, Figs. 15/4—9.

²⁾ Seligman and Beck 1938, Pl. IV, Nrs. 3 and 4.

³⁾ Gibson 1940.

⁴⁾ Similar specimens in Janse 1932, Pl. IV/10, 11.

In 1927, Rudenko explored a kurgan between the villages of *Vavilonka* and Zarechnoie on the Uda, East of Semipalatinsk.¹⁾ The mound again consisted of large stone blocks and earth. Below lay a square trench (3×3 m.²⁾) orientated towards the cardinal points. The floor (1.75 m. deep) was laid out with stone slabs, and the walls covered with horizontal beams which were supported by stone pillars at the corners. To judge by their height the construction did not quite reach to the surface. Traces of burning could be found on the pillars.

In Kiselev there is no mention of the persons themselves buried there. Among the gifts, there was a massive iron dagger (Pl. VII: 1). It is like the weapons from the Tuiakhta Kurgans, and is thus nearer to the Scythian and Persian types than to those of the Minusinsk Basin.

There was also a sharpening stone bored through (Pl. VII: 2). We know this shape already from the Maiemiric finds.

On a fragment of a strap was found a heart-shaped ferrule, and, which was strange, x-shaped bronze sheaths for strengthening (Pl. VII: 8). This bit of leather presumably belonged to a belt.

Broken knife blades (Pl. VII: 3), also thin needles and a sword-hook (Pl. VII: 9) were of bronze. This signifies an ancient feature in comparison with the Tuiakhta Kurgans. A broken bronze mirror also belongs to an earlier form (Pl. VII: 7) (in the Sarmatian district about 5th—4th century B. C.) A three-edged arrow-head with tang (Pl. VII: 4) can also be reckoned to the 5th—4th century B. C.

At the north wall of the trench lay a golden neck-ring (Pl. VII: 5) and a piece of gold leaf (Pl. VII: 6). It represents the head of a bird of prey with a sharply curved beak, dissolving into spirals. Kiselev considers this representation with the specific spiral ornamentation as definitely of Chinese origin, and as leading on to the many which are similar, belonging to the later Sarmatian time.

3. Simple Burials of High Altai.

In 1933, the Sayan-Altai Expedition under the leadership of Kiselev²⁾ explored the small, but completely stone-built kurgan in the surroundings of the village of *Kurai* of the Aimak Kosh Agachok in High Altai. It was so shallow that in the 8th century A. D. it could be included without difficulty in a new kurgan. The dead man lay, together with his steed, above the old mound. After this later burial had been examined and was finished with, a square trench of about 2×2 m.³ was found under the shallow layer of stone, through-measurement about 7 m. In this was found a low larchwood chest of about 1.4 m. in depth. The bottom was laid out with boards, and the roof also was of boards. This chest did not fill up the grave, but left room on the north side. Here lay the horse, on its belly, the tail towards the north-west. Obviously a second one had lain there, too, but the remains had been entirely destroyed by grave-robbers. On the left side of the skull of the first horse were found four carved wooden imitations of boar tusks, bored through at the base (Pl. VIII: 16). Another imitation lay under the horse's skull. As usual they obviously belonged to the harness.

¹⁾ Material in the Semipalatinsk Museum, only described by Kiselev 1949, p. 173. *Vavilonka* lies on the extreme western slopes of the Altai, but both, culturally and geographically, it approaches more nearly to the High Altai sites than to those of the northern anterior. Thus it is mentioned at this point.

²⁾ Kiselev 1949, p. 178.

In the badly destroyed and plundered wooden chest were found the remains of a man and two women. Debets¹⁾ considers the skulls to be Europoid.

In the inventory, Kiselev mentions iron objects, which were covered with thin goldleaf, and remains of two wooden sculptures representing the mouth of an animal and a griffin-head with round eyes which are surrounded by a raised ring (Pl. VIII: 8). Kiselev sees in these eyes an accordance with the «Hun» bronzes of the Ordos region.

Mention of three kurgans, which Rudenko examined near Aragol, are only accessible in Kiselev's statement.²⁾ There were graves of riders, which are very similar to the Tuiakhta ones, in the way they are built. The appearance of bronze bits (Pl. VII: 12), hints that they are ancient. They differ from the Tuiakhta finds, in that in all three kurgans miniature representations of single-edged knives were found (Pl. VII: 10). In one kurgan, still more bronze miniatures were discovered, also a battle-axe (Pl. VII: 15) and a dagger (Pl. VII: 11). The battle-axe was fixed as Late Tagar by Kiselev, but the dagger was attributed, more exactly, to the second half of Stage II of the Tagar Culture, that is, the 3rd—1st century B. C. Sword-hook (Pl. VII: 14) and pseudo-buckle (Pl. VII: 13) represent the usual forms. These kurgans have, of all the contemporary Altai monuments, the closest connections with the Minusinsk Basin. Features in accordance are also to be confirmed at the grave Bystrianskoe Nr. 8.

In 1937, the Sayan-Altai Expedition on the Ursul river, near the village of Kurota opened a very modest burial-site.³⁾ On the surface, the grave was marked with a round stone circle, diameter 5 m. In the middle of the circle, a right-angled trench was found, 2.7 × 1.9 m. along the side. At the bottom of the trench stood, at a depth of 3.2 m., a wooden framework made of two layers of beams, covered with similar beams. On the north side, space had been left again, and there lay a horse, with its tail towards the west. Among the few pieces, which escaped the notice of the robbers, were S-shaped earrings of gold wire, and cross-shaped pieces of gold leaf, finished off with volutes. Kiselev declares that these volutes represent the stylization of animal motifs. In the burial-place itself, except for destroyed bones, only the fragments of two vessels could be found. One was of Tagar shape, but the other belonged to a later type, as we shall get to know it from the Shibe Kurgan.

An interesting complex was discovered near Kumurtuk, on the bank of the Chulyshman, and was given to the Barnaul Museum.⁴⁾ It included, as well as arrow-heads (Pl. VIII: 2), three arm-rings which were bent out of bronze rods, and a bronze arm-ring with carving on the outer side, a bronze chain (Pl. VIII: 3), a silver neck-ring, a bronze leaf ornamented with a raised spiral (Pl. VIII: 5), a bronze leaf with the design of a panther (Pl. VIII: 7), a strong little bronze disc with an opening in the middle, another, ornamented with three strongly stylized griffins (Pl. VIII: 6) and, finally, a half-bullet-shaped bronze metal object, with designs of boars (Pl. VIII: 4). Kiselev believes he can clearly recognize the effect of the Graeco-Bactrian culture province in this style.

Finally, Kiselev reports a bronze dagger, the pommel of which is ornamented with two griffin-heads opposite each other (Pl. VIII: 1). Here it should be a question of a Minusinsk product, for which the patina might speak.

It is natural, that the whole time, in Altai there were burials without the inclusion of horses. Kiselev's excavations in 1934 furnish a proof of this. On the lower terrace of the river Karakol, the largest tributary of the Ursul, he opened three earth kurgans.⁵⁾

¹⁾ Debets 1948, pp. 140—141.

²⁾ Kiselev 1949, p. 181.

³⁾ Kiselev 1949, pp. 178—179.

⁴⁾ Kiselev 1949, pp. 181—182.

⁵⁾ Kiselev 1935, pp. 97—98. A rich stone kurgan of the same excavation season is dealt with later on.

Under the mound, trenches were found, about 2.5 m. long, 2 m. wide, and 3 m. deep. They were filled with pieces of stone and earth. The traces of the robbers' digging were clearly seen. Just above the bottom of the trench, a layer of stone slabs was found, which, earlier, had rested on wooden cross-supports, 50 cm. above the ground. They had been broken into and the skeletons had been knocked to pieces.

Only in two cases was it possible to decide the position of the dead. They lay, as usual, stretched out, on the back, with the head towards the west. Only a minimum amount of remains were preserved, among them a whorl of stone, small beads of blue and white paste, thin gold leaves, and unidentifiable pieces of iron.

The pottery is surprisingly similar to the Late Tagar of the Minusinsk Basin. The beads, also, accord with finds in this district. Bones were found, of cattle and sheep, but no horses' skeletons.

The spinning whorl suggests that here it is a question of the burial of women. Kiselev does not concern himself with this matter.

4. Middle Kurgans of High Altai.

Only a round mound on the surface, 18.5 m. through, 85 cm. high, showed the presence of a burial-site, which Kiselev¹⁾ dug out in 1934, in the immediate neighbourhood of those already mentioned on the upper terrace, on the *Karakol*. It was, however, built of stone, including bits of rock 80 kg. in weight.

In the mound, bones of sacrificed cattle, horses, and sheep were found. Under the middle of the kurgan, a relatively small trench opened up, which only measured 4 × 3 m. from east to west. It was filled with earth, stones and gravel. The signs of the passage of grave-robbers were clear, and sheep bones, the lower jaw of an elderly person, and fragments of flat-bottomed vessels, reminiscent of the Tagar kind, were found in it.

Above the floor of the trench, at a depth of 5.5 m., a powerful supporting structure once stood. At the corners, also 50 cm. from the wall of the trench, were thick posts, bound together in pairs by the cross-supports. Above lay a floor of beams which had to carry three layers of heavy stone slabs (up to 200 kg.). On the ground, in the trench, was a low wooden chest, the bottom and the walls of which were clearly recognizable. Of the top, hardly any remains could be confirmed.

The supporting structure had fallen in, a long time ago. This made it easier for the grave-robbers to get at the middle of the burial place, which was, accordingly, completely cleaned out. The slabs which lay crooked had, however, protected everything which was deposited at the north and south wall of the chamber. Along the north wall lay three horses with heads to the east, the lowest and highest on the belly with legs under them, and the middle one on its back. They had been killed by a blow on the forehead with a battle-axe with rhomboid cross-section. Slabs had been placed to keep them one above the other. Otherwise the way they were deposited did not give the impression that special trouble had been taken.

On the uppermost horse there was a saddle. Its position showed that it had only been put there at the end of the proceedings. Rein-fittings of bone (Pl. VIII: 13, 14) were preserved (as known from Shibe), and, above all, four bent bone objects, which could only belong to the saddle-bow, a buckle, ferrules, and the remains of the forward saddle-bow, made of wood. The shape of the back bow could be reconstructed from the parts of bones. Near these pieces of bones, gold foil was found, which had presumably covered them. A neckstrap belonged to the saddle, but only three wooden pendants and a little bronze bell remained preserved. In this bell, the clopper was hanging in a strange way,

¹⁾ Kiselev 1935, pp. 98—106, and Kiselev 1949, pp. 189—193.

attached to a fastening which was stretched between two openings in the bell (Pl. VIII: 11). Between the teeth of the uppermost horse, a ring snaffle of an early shape was found. At the skull, there lay numerous gold leaves, which probably ornamented the straps of the harness.

In the plundered middle part were found solely potsherds which fit in with those from the robbers' gang, and some overlooked pieces of gold leaf. Here lay, probably, the dead man whose lower jaw was found where the grave-robbers had passed.

At the south wall, the skeleton of a young woman was found, orientated towards the east, stretched on the back, the hands laid to the sides. She rested upon a layer of mouldered bark. Over her body was a covering which, as far as could be confirmed from pieces under the skull, was made of bright red silk. It was embroidered over and over with little metal leaves of different shapes, most of which had kept their original position, even where the stuff had disappeared. Thus one could recognize the measurements and position, and also the pattern. The woman had obviously been completely wrapped up in the covering. Fastened to the edges, like a chess-board, were 150 round, gold-covered bronze sheaths. The middle part of the covering formed a pattern, with fourteen smaller and ten larger half-round metal sheaths, also of bronze and gold. The rest of the inner surface was covered with 130 square metal sheaths, in chess-board pattern. The space between the inner part of the surface and the edge was filled up by 1180 gold spangles (3×3 mm.²), also arranged in chess-board fashion. The edges of all the metal sheaths were bent downwards, which lent them a massive appearance. In reality they are much too fragile, for the covering to be an object of use. According to Kiselev, it must have been a show piece for state occasions destined to be used only for the burial.

Under the covering, traces of clothing could be confirmed, presumably not of wool, but of leather and fur. At the pelvis, single beads were found, which had obviously once been sewed on. Round the neck lay a strange kind of spiral ring. It consisted of bent, ribbed bronze tubes, drawn up on a strap, and, on the outside, wound round with goldsheaths. This construction of gold, bronze, and leather gave on the one hand the impression of massive gold, and, on the other, made the ring elastic and light. The ends of this neckring were decorated with wood and gold-covered panther-heads. One of these is better preserved and represents an amazing little work of art (Pl. VIII: 9). The little knobs were stuck into the neckring with a wooden peg. Kiselev thinks they could be changed over, according to wish. At the side of the skull lay ear-rings of gold wire (Pl. VIII: 10), such as we have already come across. Goldleaves and smaller pieces of gold wire belonged to a headdress which the stone slabs had broken and which could not be reconstructed. On the gold, traces of bright red were seen, the remains of painting.

Near the head was a wooden cassette, crushed by the stone slabs. It was once decorated with leather appliqué. Its lid could be lifted with one iron ring. Between the mouldering sides, gold foils were found, also a bronze needle and a bronze mirror shaped like a medal, the loop on which represented a schematic figure of an animal (Pl. VIII: 15). It accords with the Late Tagar finds. Next the cassette, stood a square stone table, hollowed out like a trough, and with four low feet (Pl. VIII: 12). Traces of fire were to be seen in it, but also goldfoils like those which appeared in the headdress. It doubtless belongs to the »portable altars», of which Tallgren treats.¹⁾

In 1947, Kiselev²⁾ examined Kurgan Nr. 1 of the chain of Kurgans *Kurota I*. The Kurota brook belongs to the basin of the Ursul. Under a stone mound (20 m. through, and 1 m. high), a trapezoid-shaped trench was found. It was fairly large (from north-east to south-west 6.8 m. long, width at south wall 5.4 m., at north wall 4.4 m.), and unusually

¹⁾ Tallgren 1937a, pp. 51—68, and pp. 206 and 207.

²⁾ Kiselev 1949, pp. 194—195.

orientated, perhaps because the Kurota and the mountain chain which accompany it, run from north to south and not east — west, like the Ursul and the Karakol.

The trench was filled with stones to a depth of 2.7 m. Below, the remains of a floor were discovered. It rested on stone walls, which had been made about 50 cm. thick at the south, west, and north walls of the trench. This floor and the walls of the trench were covered with a layer of mud, which showed that the trench had stood open long after the erection of the inner structure. Perhaps it had already been built in reserve. The remains of a robbers' passage could be confirmed, which, as an exception, went from the side, to the place of burial. In this, human bones were found, also gold spangles and remains of charred birchwood, which came from a torch. Under the floor, once more, sand and stone were found. It was also seen that, besides the stone wall, three huge cross-supports, which were held up by only one pillar at the east and west sides of the grave, carried the floor of beams. Only at a depth of nearly 5 m. was a low wooden chamber discovered. The tree trunks which formed the top, the larchbark covering them, and the meagre remains of the chamber walls were crushed into an indefinable mass. Only scraps of woven stuff, pieces of gold leaf, copper pyrites, a heavily gilded iron button, and completely destroyed human bones could be confirmed.

At the east wall of the chamber, between the supports, the skeletons of two horses were found, one on the top of the other. This position we know already, from the Karakol Kurgan, but here the horses were cut in half and put together again in such a way that the skull lay by the tail. The uppermost horse was saddled, but, except for a small quantity of wood and leather remains, only a great many goldleaves of all kinds of shapes (commas, little combs, triangles and plates) could be defined. On the croup lay little cylinders of gold leaf which had once adorned the tail-strap. Separated from them were the remains of bridles. Owing to a little heap of earth, they had escaped the notice of the robbers. The straps of the bit were adorned with little pieces of wood of which only the gold covering still remained. This also was badly damaged and crushed.

The construction of this kurgan represents a strange variation of the Karakol Kurgan. The appearance of three pairs of pillars, as we shall see, points towards the princely kurgans of the Pazyryk type.

Here, the stone *Kurgan Nr. 7* near the village of *Tuiakhta* which was examined in 1933 (presumably by the Sayan-Altai Expedition)¹⁾ can be mentioned.

This kurgan covered with a mound of stones, 20 m. through and 1.40 m. high, a trench, 4.10 m. long toward the northwest-southeast, 3 m. wide and 5.2 m. deep. In the lower part, as in the Kurota Kurgan, the stone walls reached a height of 1.80 m. Just so, a floor of larch beams rested on their outer edge. On the ground, in the trench, filling up the southern half, stood again a low structure of larch beams wedged into each other. The floor was also of wood. The covering was probably destroyed by the grave-robbers who plundered the Tuiakhta Kurgan when the ceiling was still intact. The robbery was conducted with special enthusiasm. In the robbers' passage were found only much-destroyed human bones. In the wooden structure itself, there were bits of mouldered wood, covered with copper pyrites, indefinable remains of gold leaf, and finally scraps of thin leather with traces of copper pyrites and seams made of sinews. They probably belonged to clothing. As was to be expected, horses' skeletons were found in the northern part of the trench, but not one on top of the other. They were, instead, one behind the other, in a row. At the heads of the horses were found again, ring snaffles, as known from the Kurai and Karakol Kurgans. At the skull and on the forehead of one of the horses, amorphous thin gold leaf was confirmed, bearing traces of red colouring. It should

¹⁾ Cf. Kiselev 1949, p. 195.

be noticed, that one side was always intensively dyed. Perhaps the dye which was certainly made with resin served also to stick the leaves on to the straps.

In 1935, a kurgan was excavated near *Kurai*, by the Sayan-Altai Expedition (Group II, Kurgan 1), which was distinguished by a specially complicated burial rite.¹⁾

The trench measured 3 m. square, by 2.80 m. depth. As space for burial, a low chest of larch beams served, which was covered with larch boards. This structure had double walls. The outer chamber measured 2.80 m., east to west, width 2.70 m. In it stood a smaller one, 2.50 × 1.25 m. The southern wall was the same for both. The walls of the inner chamber were wedged into those of the outer. In the inner one, which was, owing to robbery, in great disorder, lay the bones of three people, much broken and damaged, and between them the fragments of an iron knife and fragments of gold leaf. Besides these, there were found in the middle of the chamber, the sacrum of a horse and sheep vertebrae, and, at the east corner, pieces of a flat-bottomed vessel of red clay, decorated with imposed clay-bands and notches. Such vessels are characteristic of the Pazyryk time of Altai.

Three horses were confirmed. Two lay next each other with the head towards the east, on the right side, parallel with the north wall. In the bits, iron snaffles were again found with a ring at the end. On their backs a belt of black humus showed the place where the saddles or rugs had presumably mouldered away. By the horse which lay nearer the south wall, this saddle or horse-rug had been covered with two round pieces of gold leaf.

A third horse lay considerably higher, near the north part of the ceiling, i. e. at the north wall of the trench, with the belly downmost, the feet beneath, the neck slightly raised and the head turned to the north. It had the same iron bit, and on the forehead was gold leaf of indefinable shape. In the middle of its back was a round bone disc with a projection at the side, and a small hook. It was strongly reminiscent of the usual buckles of the Pazyryk time, with fixed spike.

This kurgan represents an extremely interesting monument. The plan of the death-chamber conforms completely to the double-walled wooden structure of Noin Ula, which is constructed in just the same way, and in which the inner chamber is also stuck on to a wall of the outer. This detail cannot be a coincidence. In the *Kurai Kurgan*, the inner chamber is not only drawn nearer to the southern outside wall but also purposely joined to it.

Kurgan Nr. 5 in the *IAkonur-Steppe* (Ust'-kansk Aimak, in the High Altai district) is worth a whole chapter in itself. Griaznov excavated it for the Altai Expedition of the Hermitage, in 1939.²⁾

The fact that such an extensive mound (25 m. through), consisting of earth only, existed, was unusual. After the earth had been cleared away, two frameworks, made up of tree trunks, one inside the other, were discovered at the level of the surface of the earth. Inside the fencing, circles made of stones were found. The trench itself was oval, in contrast to the burial customs observed uptill then, and filled with earth. It also appeared that the west side of the trench wall contained a large niche. In this stood a sarcophagus made from a hollowed-out tree trunk. In spite of the robbery, it could be confirmed that the skeleton of an old woman lay there, stretched out on the back, the head towards the north. She wore a headdress, ornamented with gold leaf (Pl. XVII: 1). The complicated spiral scroll patterns remind Kiselev of the polychrome appliqué on the felt carpet from Noin Ula, but Griaznov compares this ornamentation with Chinese works of art of the

¹⁾ Kiselev 1949, p. 193.

²⁾ Griaznov 1940, pp. 17—18.

Kiselev 1949, pp. 195—196.

Han Period. An openwork plastic from Chaatas Uibat in Khakassia is also brought into comparison.

A similar ornament appears on a little bone comb in this kurgan (Pl. XVII: 2). Unfortunately, otherwise, only single pieces of gold trimming for large beads with facets, a wooden knob and an iron knife are preserved.

The peculiarities of the above-mentioned kurgan are all the more striking as the one opened immediately next it, *Iakonur Kurgan Nr. 8* again resembles the *Karakol Kurgan*.¹⁾

In its simple right-angled trench were found two full-grown people and a child. At the side lay two horses. Unfortunately, the destruction by grave-robbers did not allow further confirmation of the inner structure and of the original position of the skeletons.

According to the scanty remains, the kurgan must have been a very rich one. The clothing of the dead was apparently sewn with gold leaf, but only about sixty pieces of this were well preserved. Three clay vessels, maral horns and two bronze mirrors (Pl. XVII: 3) were also left. These bronze mirrors were medal-shaped, with a handle strongly plastic, but otherwise they resemble the Late Tagar ones. A find of Chinese lacquer is very significant. It must have belonged to a vessel.

Regarding Kurgan Nr. 5, Griaznov assumes that the dead woman was of noble foreign blood and was buried here according to her native ritual in one of a row of kurgans belonging to a clan of high rank. This assumption seems completely justifiable.

5. Princely Burials of High Altai.

From such rich grounds as *Karakol* it is only a step to the princely kurgans. They differ from the smaller ones in that there is a greater number of horses. Doubtless, the more horses, the more dignified had been the recognized position of the dead. We know of such special rules for princely burials from the Scythians far into the Mongol time.

The most significant, and maybe earliest among them are the *Pazyryk Kurgans*. They lie in eastern Altai at a height of about 1500 m., 2 km. from the *Ulagan* river, in the old bed of a glacier. Once upon a time there was, in the big shallow basin, a lake, which must have dried up before the erection of the kurgans. The next large settlement is the *Aimak-centre Ulagan*. The name «*Pazyryk*» comes from a little settlement about half an hour away. Here it is again a question of one of the usual kurgan chains stretching from north to south. To this belong five large and some smaller kurgans, the number of which is not given exactly. They were discovered in 1924.

Pazyryk Kurgan I.

The first kurgan was examined by the Russian State Museum Altai Expedition in 1929, in the short space of time limited by the shortness of the summer. The expedition was led by Griaznov and Rudenko. Both have made, at different times and independently of each other, statements about the brilliant results, which, unfortunately, do not quite agree.²⁾ The reports were taken over by the West and commented upon with enthusiasm.³⁾ Therefore, I need only summarize.

This kurgan consisted of a mound (50 m. through, 2 m. high) which, as customary with the smaller kurgans, had a covering of stone. Under the middle of the mound, there

¹⁾ Griaznov 1940, pp. 16—17.

²⁾ Griaznov 1929, 1937, and one not yet available work from 1950. S. I. Rudenko 1931 and 1944. S. I. and N. M. Rudenko 1949.

³⁾ Griaznov and Golomshtok 1933, Amschler 1933, Tallgren 1933a, Morgenstern 1936, Field and Prostov 1940a and b, to Alföldi 1950. The list could be made still longer.

was a square trench, 7.20 m. long at the side, orientated to the cardinal points. As progress was made, here, a many-layered »armour» of tree trunks was again found. Under this, as with the middle kurgans, stood two chambers, one inside the other. The outer one consisted of rough beams, the walls of the inner one were skilfully hewn. So that the structure should not be crushed in by the heavy layer of tree trunks and stones, a supporting scaffolding had been erected, consisting of three huge cross beams, each borne by one pair of pillars, one of which stood at the north wall, and the other at the south. The chamber took up only the south part of the trench. The north side remained free, and served for the horses. The invasion of this structure by grave-robbers was obvious. The robbers had taken endless trouble to hack their way through the various beams, and finally slipped into the chamber through a narrow hole. Just above the inner chamber, their archaeological successors struck ice. As they went further, it was revealed that the complete burial-place, including the horses, was frozen, in one large block of ice. This created the best conditions for preservation which could possibly be wished. The excavators reported that the wood still felt perfectly fresh, and a strong smell of resin issued from it. Only a very small part of the ice had come from condensation water inside the chamber. Muddy water had flowed through the grave-robbers' open shaft, and frozen, so that the chamber was full of ice. The robbery had taken place so soon after the erection that perishable material, without being frozen till then, was not destroyed.

The construction of the kurgan played an essential part in the formation of this strange ice-block. The loose stone covering reflects the sun's rays, but lets in ice water and cold air without hindrance. The ground, surrounding the grave, was not at all permanently frozen.¹⁾

When the chamber had been thawed, it was seen that it had been thoroughly plundered. Even the corpses had been taken to the surface, so that they could be undressed more easily. In any case, there was no trace of them. Only a large wooden sarcophagus remained, in the form of a hollow tree trunk with a lid, an extremely interesting wall-covering of variegated felt, the foot of a table, and some gold spangles, also felt rings which could not be classified.

The robbers had known very well that the horses with their valuable harnessing, lay at the north side of the chamber. The wall of the inner chamber had been hacked through, and, in the outer one, yawned a hole, large enough to touch the horses. As a broken handle which once belonged to a socketed celt was found in the robbers' passage, Griaznov following somewhat in the footsteps of Sherlock Holmes assumes that the robbers' tool broke during this resolute activity and that they had no time to repeat the attempt.

These »Two Thousand Years Old Horses of Altai» so well preserved for us, and ten in number, are certainly of noblest breed. They resemble the best strains of Turkmenistan or Ferghana. They have nothing to do with the »Mongolian» horses, which were to be expected here in Central Asia. They are too fine and too sensitive to come from the rough High Altai, and on a level with the quality of sheep wool used, which comes from animals found under very favourable climatic conditions, or from animals kept in a shed. Here we find little connection with local products. Also, the examination of the contents of the stomach showed feeding with grain, an appearance which is not usually to be expected in nomad horses. The horses were marked with cuts on the ears, and the marks on each horse were different.

All the richly ornamented trappings were as well preserved as the horses themselves. The psalia consisted mostly of carved and expensively gilded wood. They bore designs in Animal Style. The snaffles were of iron, in only one case of bronze. No set was exactly like any other.

¹⁾ Delegates sent specially by the Soviet Institute for Frozen Ground Research worked with the expedition which examined Kurgan II.

The saddles were amazingly primitive. They were simply cushions stuffed with reindeer, or deer hair, with felt underneath, and over them were felt saddle-coverings, expensively decorated with animal designs. They are more like modern reindeer-saddles than ordinary horse-saddles. By them lay various trappings, little shields made from small staves of wood, leather bags, etc.

Besides the normal adornments, masks had been allotted to two horses. They were fantastic compositions of felt, leather and hide, in Animal Style. In one case, the horse seemed to be disguised as a reindeer, in the other, as a winged griffin.

Pazyryk Kurgan II.

This kurgan was examined, during two summers, by the Leningrad Branch of the Institute of History of Material Culture, under the leadership of S. I. Rudenko. It lies to the South, near that excavated in 1929, on the former bank of the lake. The reports come exclusively from Rudenko.¹⁾ The relatively long duration of the excavation was due to the care with which the ice-block in which the complete burials were contained, had to be thawed out.

The Pazyryk Kurgan II is very like the first in construction and is nearly as high, though the through-measurement is less (36 m.). Outside, it is covered with a layer of stone. Under this is the mound, which, this time, consists of clay and stones. The pit is 7.10×7.80 m., thus a little wider than in the first kurgan, but only 4 m. deep.

At the bottom of the trench was a stone layer, over that earth, and over that again a flooring of beams, on which the wooden structure was erected. Once more, two chambers stood one inside the other. The inner one, which was constructed out of carefully smoothed tree trunks, enclosed a space, 3.65×4.90 m, by 1.50 m. high. Between the outer and inner chamber there remained a free space, not filled up with stones, 15 cm at the east side, 20 cm. at the north, and 30 cm. at the west.²⁾ The ceilings were covered with birchbark and shrubs. Above the chamber again was erected a supporting scaffolding of stakes (35 cm. thick), three at the north, three at the south-side, bound together by cross-supports. On these rested nine layers of beams. Between them and the northern trench-wall, a space remained free, which was used for the disposal of the horses. Thus they lay on a step. The two upper layers of beams covered the horses' mortuary also. They were also covered with bark and shrubs.

Let us take a look at the finds outside the burial chamber.

To begin with, one could again confirm the usual signs of grave-robbery. It had been achieved perpendicularly through the layers of beams into the chamber. In the rubble, which filled this shaft, were found various pieces of woven stuff, which should be discussed together with the rest of the textiles.

At some places, wooden shovels and wedges were met with, that is to say, building tools, which had been thrown into the pit while filling it up. A clumsy wooden wheel (30 cm. through), cut from a tree-trunk, and with an inner opening of 10 cm., can be reckoned to the building and transport material.³⁾

The horses were frozen into the ice, but, owing to the level at which they lay, they

¹⁾ Rudenko 1948, 1949a, 1949b, 1949c, 1950a and 1950b. The excavations of the year 1948 are only considered in the popular article which appeared in 1950. Certain short remarks of Kiselev are important for the dating (Kiselev 1949, p. 214 and 1951, p. 392).

²⁾ It is not reported, whether an intermediate space existed between the southwalls. On the other hand it would have been noticed if the two had been joined together.

³⁾ Perhaps there were axles of wheels in the loops of the coffin, and the coffin was transported on such wheels.

had obviously been thawed out repeatedly, thus they were in a very decayed condition and had been very much crushed by the layers of beams.

The trunks and heads of the seven animals, which lay behind each other, heads towards the east, on the left or right sides, were badly preserved. Thus one could not see if the ears were marked. All had been killed by a blow with a battle-axe, which had made a rhomboid cut on the forehead. Their extremities were better preserved, also the hair, so that one could see that all were dark-coloured. The manes were cut close, the tails partly plaited and artistically twisted.

As to the harness, the bits remained wonderfully preserved. Five were of forged iron, two of cast bronze, and all were of the usual shape.

The psalia were missing on two horses. One wore horn psalia in the form of a slightly crooked wedge, four pairs of psalia were of wood artistically carved. Three were of the usual S-shape, with two openings for reins and covered with gold leaf. The ends of these were formed into animals' heads, one a wild-cat (Pl. XIX: 1), one a goose (Pl. XIX: 2), and one a sheep (Pl. XIX: 4). Only one pair of psalia were straight. Their coverings were of tin and gold, and they had ram's heads (Pl. XIX: 3) at the ends. All four were complete masterpieces.

The harness also had ornamental plaques. But only two sets were more richly accoutred.

The horse with the horn cheek pieces was decorated with a forehead-plate of stag-horn (Pl. XVIII). On this were two geese, heraldic fashion, in the jaws of a beast of prey with horns and long ears. The right and the left half each forms a complete composition in itself. The half-head of the wild beast looks like the profile of a beast of prey with open jaws. The work shows remains of yellow and red painting. Button-like discs of stag-horn, which presumably covered the crossing point of reins, belonged to the same harness (Pl. XIX: 7). They display a lotus motif, entirely suggestive of the oriental, and were also painted yellow and red.

Small plates, on which wooden figures of supine cat-like beasts of prey were carried out in full plastic style (Pl. XIX: 5,6), belonged to the harness with the wild beast psalias. The material was wood. The plastic items were covered with gold. The design is masterly. Owing to its plastic form it constitutes a great rarity.

A flat round forehead-plate with a hump in the middle forms part of the same harness.

The leather parts of the harnesses are destroyed out of all recognition. Only various little bone pseudo-buckles and buckle-like objects possibly fastened to straps (and if so, the forerunners of the strap-tongues later so important), and other small details were reported.

As in the first kurgan, two horses were allotted masks. On one there is what seems to be a ram, attacked by a bird. The state of preservation does not permit closer description.

The saddles, as in the first kurgan, consisted of leather cushions and felt-blankets. The cushions were, however, stiffened by wooden bows in front and at the back. The outer saddle rugs are decorated in two cases with many-coloured felt appliqué, in the first case with a griffin (Pl. XX: 1), and in the second with an elk (Pl. XX: 2). The third saddle is adorned with the scene of fighting animals, a leopard attacking an elk (Pl. XX: 3). Here the appliqué material is leather once thickly covered with colour. Such saddle coverings were certainly not made to be used. The saddle bows were covered over with leather and overlaid with tin and gold. Only one saddle had chest and tail straps. Behind the saddle hung leather straps as in the first kurgan. They were weighted by bullet-shaped objects, into which hair was inserted as tasseling.

Little shields made of parallel rods were found near hide bags (Pl. XXI), which had obviously contained provisions (in one, cheese was confirmed). Rudenko thinks that their only purpose was to protect the provisions from contact with the warm bodies of the horses, in opposition to the earlier theory that they belonged to war equipment.

Of special artistic value is a whip-handle, which represents a fleeing horse (Pl. XXV: 1), attacked by a wild beast. The middle part is, alas, much destroyed. The artist has curled the body of the animal in a spiral round the whip handle in an extraordinarily clever way (Pl. XXV: 2). The handle has two openings, one for a handle-loop, the other for the whip-strap.

In the chamber the conditions for preservation were much better than in the horses' burial place, but even here more easily destructible stuff had already decayed. The ice had formed into two sections. The ground was covered with clear transparent ice, some 12 cm. high, which came from condensed water and was formed before the robbery. Various objects, thrown away carelessly by the robbers, lay on this ice-layer. Over these the chamber was filled with dirty yellow ice from the water which had dripped through owing to the robbery. Only the complete filling-up put an end to the process of destruction.

The ice could only be thawed out after much trouble had been taken, and it took a long time as warm water had to be used. The technique of this process led to the unfortunate fact that it is often not known exactly where the objects were lying.

The chamber consisted of wooden beams. The floor and walls were covered with black felt to a height of 65 cm., and the felt was secured with wooden pegs and bronze nails. The felt had no pattern, as was the case in the first kurgan, but, in place of this, it had very probably been decorated with ornamental borders, which the robbers had torn off and taken away. Only two modest remains were left. They were of white felt, on to which variegated feltpatches were sewn or fastened with woollen threads. One border has a lotus motif (Pl. XXII: 1) and the other has lotus blossoms on strange-looking stands which are tied to each other with garlands (Pl. XXII: 2).

Narrow runners found in the rubble were perhaps spread over the felt on the floor between the objects. They will be dealt with in the summary devoted to textiles.

This rubble fallen from the robbers' shaft took up nearly the whole centre of the chamber. The most important finds were grouped at the east, south and west sides round this cone. It is easiest to form a picture of the situation, when one sees it thus:

At the east wall, the domestic utensils (tables, food, vessels, musical instruments).

At the south, the sarcophagus.

At the west the burners and the other ritual objects.

At the north, outside the chamber, the horses.

Let us begin, according to the order in which the discoveries took place, with the east side.

The most revealing inventory is provided by four little tables with oval dishlike tops on which meat had probably lain (Pl. XXIII: 4). They had been broken up by the robbers, partly so as to bring their booty up into daylight on the tabletops and probably partly to provide something, on which they could cut up the corpses.

The construction of the tables helped towards this purpose, as all the feet were inserted quite loosely into the tops, and most of them remained stuck into the lowest layer of ice. The fact that the tables could be taken to pieces probably hints at the nomadic life led by their owners.

One of these tables had turned legs (Pl. XXIII: 3), and the legs of the other one looked the same, but were made by hand (Pl. XXIII: 2). In the case of two other tables the legs took the form of a lion standing on its hindlegs (Pl. XXIII: 1 and Pl. XXIV), which in its plastic form and perfect naturalness suggests oriental connections. The feet were partly overlaid with tin and goldfoil, and partly also painted. The tables can to a certain extent be reckoned as an intermediate form between a table and a dish. They connect up with the other vessels, which were also found in their immediate neighbourhood.

A clay vase of 50 cm. height corresponds with a type which is widespread in smaller kurgans of the Pazyryk time also. The body is ornamented with leather appliqué which is overlaid with tin, in the usual technique (Pl. IX: 7). It forms a frieze of strutting cocks, each one of which has been made separately. The second vessel may have been of equal size and shape. The body was decorated with a frieze of lotus blossoms, but it is impossible to be sure about this as it was so badly preserved.

The wooden vessels which belong to the same set, are especially important. They are made by hand, and this was accomplished with a knife which had a blade crooked at the side and which must have been prepared specially for this purpose. The first vessel has a rounded bottom and the neck is slightly curved outwards (Pl. XXVI: 3). Its height is 13.5 cm., through-measurement 15.5 cm. The handle is long and lends to the vessel the appearance of a dipper. It is bent in a remarkable way. The part leading downwards is of cattle-horn and ends in a horse's foot. In the wooden part of the handle there is a cleavage, which served to hang it up. We know of vessels of this kind from the burial grounds of the Tashtyk Culture. Curiously enough, this coincidence is not in any way emphasized by Rudenko.

The other wooden vessel is of the same measurement (height 14.5 cm., width 13—14 cm. respectively) (Pl. XXVI: 2). It has only a short, yet high handle.

These round-bottomed vessels were set upon rings made of strong black felt, some 2 1/2—3 cm. in height, overlaid with thin black or red felt and sewn with woollen thread. Their through measurement accords, naturally, with the size of the vessels. The find of such «stand rings» is of great importance. It explains how the transition from flat-bottomed vessels to round-bottomed ones came about. It is strange that remains of a carpet were also found, on which such felt rings were sewn. This suggests a modern tray supposing that it had saucers fixed to it. Inconveniently enough, however, a vessel with a flat bottom was standing in the stand ring.

As all these finds lead to the conclusion that food was left for the dead at the east wall, it is clear that a knife (Pl. IX: 6), found near them, was probably included in the necessities for the table. The knife was 20 cm. long, but the handle alone formed 12.5 cm of this measurement. The handle had an E-shaped ornamentation of gold leaf and was not sharply distinguished from the blade. Only the pommel was thicker and had an opening. Further off, the sheath of the knife was found (Pl. IX: 5). It is only a long flat rod of wood, with a deep notch in the narrow side. Into this notch the whole knife could be fitted, and only at the tip was it secured against falling out. Such sheaths explain to us amazingly well, why the distinction between handle and blade disappears in South Siberia in the last centuries B. C., and the ornamentation became concentrated on the pommel.

Musical instruments lie close to this. Rudenko considers them to have been used in connection with religious ceremonies. I am more inclined to think that they may have served to make music while dining and, thus, they lay near the objects connected with eating and drinking.

A drum was shaped like an hourglass (Pl. IX: 4). It was 18 cm. high, 10 cm at the top, 6 cm. in the middle, and underneath 8 cm. wide. The body consisted of horn plates sewn together. Over the seams, gold leaf was applied, trimmed with cord ornamentation. Only insignificant remains of the membrane were left.

Close to this lay two hollow cases carved out of large wooden blocks (Pl. XXV: 3,4). They belonged, certainly, to string instruments. As they were carved out of two sections of the same original tree, one may assume that here we have a kind of composite harp or lute. In both cases, the necks are broken, so it is impossible to decide this important question.

The purpose of a stag-horn hammer remains unexplained. It is in one piece, a branch of the antlers serves as handle and the head is cut of the main horn. It is too large to have been used to beat the drum.

At the south wall stood the sarcophagus, a huge hollow tree, 4.20 m. long. At the narrow sides, it was furnished with two massive loops which perhaps were used for transport or for letting it down into the chamber. On the outside it was covered with birchbark, with leather appliqué on it. These represented reindeer (maybe male and female) instead of cocks as in the first kurgan (Pl. IX: 3). As the two dead presumably lay also one behind the other in the long coffin, a connection with some religious idea may lie hidden there.

Inside, the tree was lined with a double layer of black felt. The bottom was covered with a carpet which we must consider more closely by looking at the textiles.

The coffin had been handled very roughly by the grave-robbers. The lid was torn off and lay by the west wall of the chamber. As the corpses had been frozen to the coffin, the whole front wall had been knocked down and destroyed. Nevertheless, the coffin contained plenty of objects, possibly also some which had not been originally there before.

A wooden pillow with leather covering probably lay under the head of the dead.

A leather bag with a flap lay at the head end. The upper part was stiffened with a rod finished off with a lion's head. It had straps for carrying. Evidently it was part of a lady's equipment, and its contents were almost inexhaustible.

To begin with, it contained a flat leather case of extremely simple yet unique shape (Pl. XXVII: 2). The case consists of a largish piece of leather to which a smaller piece is sewn on three sides. This forms a case not entirely unlike the brush-bags of our fathers. The end and the middle part are decorated with appliqué. The motif is of plant type. One could recognize lotus ornamentations. In the middle part of the smaller piece a beautifully rounded S-curve is to be seen. Rudenko makes the perceptive remark that, here, the «contorted animal», so frequent in Central Asian Animal Style, has been transmitted into a plant motif.

A leather bottle (21.5 cm. high) is similarly decorated (Pl. XXX: 2). The seams are so fine and so firmly sewn with sinews that it was probably possible to keep liquids in it, though perhaps it was used for contents of a solid kind.

Unique and apart is a pouch of 5½ cm. through-measurement. It is made of leather, and consists of two parts, shaped like half a globe. One part is slipped into the other. The inside part has an opening at the top of the «hemisphere», the outside part has none. The inside part has a ring at the base of the «hemisphere» by which it can be pulled out. The base is ornamented with a peculiar wave decoration and the top with a threeleaf design unto which gold leaf is sewn. This pouch contains Coriander. Rudenko points out that Coriander was much valued in ancient times, both as a spice and also for medicinal purposes, and as a charm. Here in Altai it certainly represents an import from the South.

In the same leather bag a mirror was found (Pl. XXXI). Its metal parts consist of a silver mirror-plate, which is equipped with a short flat staff, and a strongly outlined back plate. This has a cone in the centre, and close to this a round wall with another larger one, right to the edge. Between the raised walls, an ornamentation of concentric circles is visible, between which run light zigzag lines. This back part is fastened to the mirror plate at five points. The staff of the mirror is inserted into a cattle-horn handle, shaped like the octagonal well-polished trunk of a pyramid.

Here lay also an iron fork with diverging prongs. As it would hardly have served to eat with, its use was not clear to Rudenko.

A hide purse was found which, judging by the leather strips firmly sewn unto it, was worn round the neck. It contained hair. It is further mentioned that cut finger-nails

were also found in this little purse. This is a clear sign that here it was the question of an amulet.¹⁾

At the bottom of the coffin lay some other objects, which had perhaps fallen out of some bag or maybe belonged, earlier, to the clothing of the dead. Among them a fragment of a horn comb was confirmed, about 5 x 6 cm. large. A bow forms the upper end. Inside the bow is a little loop with a thin leather strap pulled through it. Just above the teeth a horizontal wall runs across the whole breadth of the comb.

Actually at the bottom of the coffin lay a broken ear-ring. Another one of similar shape was found on the neck of the woman in a wrinkle of her skin. Both heads had bored lobes to the ears. The significance of this simple ear-ring lies in the fact that, on a thin gold wire it had a setting once filled with precious stones or coloured glass. This shows us that the polychrome jewelry which was so important in Sarmatia at the same time, was also known and appreciated here in Altai.

Comparatively few beads of various materials, size and form were found, in the sarcophagus or scattered over the floor, or partly, in the robbers' passage. The material is mostly coloured glass or glass-paste, sometimes cornelian, or bone. The poor illustrations and inexact descriptions permit of no further comparisons.

A diadem (Pl. XXXII: 2) which lay under the leather pillow, ranks among the most remarkable finds. It consists of one band of wool, covered with leather, 6 mm. wide. Along the band struts a whole procession of cocks. They are carved out of thick leather. At their feet the leather is split into two, so that they could be stuck on to the band of wool. The wings are pressed outwards on both sides, so that the figure stands out plastically from the flat leather. Bits of sable hang from the band and they are enriched by the addition of other materials.

Under the pillow lay also some wooden figures covered with tin or gold foil. The extremities (wings, horns, ears) are mainly made of leather. The most beautiful object among them is the figure of a stag which stands on a little grooved ball (Pl. XXXIII). On the basis of the ball we notice a peg for fastening. This little plastic deserves to be ranked among the show pieces of Animal Style.

Two other similar stag-figures are less well preserved. According to the leather remains probably about six were present.

Two griffins are equipped with huge combs. The head, which is rather disproportionately large and the short wings, are reminiscent of the famous griffins from the Berel Kurgan. The little head of a horned lion, also covered with gold, is note-worthy. This head, too, had been fastened on to something. Rudenko thinks all these animals form part of a diadem, which he rather imagines to be like the famous heavy gold diadem of the Treasure of Novocherkask.

In the coffin, a peculiar piece of sculpture was found, which represents the head of a griffin, carrying the head of a stag before it in its open mouth (Pl. XXXIV). The flat parts of the plastic are covered with reliefs of a griffin with a goose in its claws. To these griffin designs on the flat sides, belong plastic wooden heads which are fastened in at suitable places. The whole thing is covered with gold, and the ears and comb are of strong leather. This piece must also be counted to the masterpieces of Animal Style.

We come across the same composition yet a second time, carried out, however, in a different way. The said piece was found outside the sarcophagus and had a leather strap. It had also been bound to something. Among the remarkable features of this composition must be noticed that the ends of the antlers were crowned with birds' heads.

The first piece must have been broken somewhere. It is beyond doubt, that the peculiar combination of griffin with stag's head in the mouth had a religious or heraldic

¹⁾ Rudenko 1950b, p. 158.

significance. We cannot, however, guess what, as we do not know the object to which they belonged.

The chief inhabitants of the sarcophagus were not found lying in it. Instead, the corpses of a man and a woman were found at the bottom of the first ice-layer. The robbers had hacked at them and cut them to pieces, so as to be able to remove the valuable ornaments more easily. Thus no complete article of clothing remains. Only a few of the garments can be reconstructed with any certainty.

The largest object preserved is a long coat of squirrel fur, the hairy side turned inwards. The sleeves are exceptionally long, and so tight that it was impossible to get one's arms into them. It was obviously made to hang over the shoulders, like the Persian kandys. The outside of the coat has strong parallel sinew seams which form a peculiar pattern, and at the most important places there are leather appliqué. Their motif consists of cocks combs and, set on to them, are gold-covered copper leaves. The coat is edged with horse hide.

A stomacher is made of the same material and decorated in the same technique. The edging is of sable and otter fur. This object evidently belongs to the same costume as the coat.

In a later work, Rudenko¹⁾ reports a man's shirt, cut exceptionally long and wide, and the sleeves became tight toward the wrists. There is a simple opening for the head, and this represents a great difference from the shirt found in Noin Ula.²⁾ The stuff was like linen, made out of plant fibres. — We do not know the purpose of small strips of fur on to which coloured leather patches were sewn and which were decorated with rhomboids of gold foil (Pl. XXVIII: 1—3).

Remains of at least three belts were found. They were of rather thin leather, but so closely sewed with sinews that they looked like belts made of stuff. They are stiffened with tinfoil. On to one, strips of leather are sewn, and it is overlaid with gold and tin (Pl. XXIX: 3). Thus a beautifully geometric tendril results of a shape which we know in Minusinsk bronzes, especially on knives.

In comparison with the first, the ornamentation on the second belt is static. It is decorated with leather appliqué in the form of rhomboids, between which are set typical »horse-shoes», »triangles», and »commas» of tin or gold leaf. At some places, obviously at those where straps should go, ornamental plaques are applied (Pl. XXIX: 2). These square plaques are of cast silver, and represent a ram with the head turned back, attacked by a lion (size 43 x 46 mm.) (Pl. XXIX: 1). The body of the ram is, once more, decked with half horse-shoes and commas. The neck of the lion has a herring-bone design on it. Rudenko thinks this represents a peculiar antique speciality. Such treatment appears already in Assyrian representations.

The third object is a piece of a narrow, and very simple belt, finished off with a simple buttonhole (Pl. XXIX: 4).

The male footwear is not well preserved, though two pairs of women's boots were easily determinable. One pair was on the feet of the woman. They had been hacked at by the robbers like the feet themselves. A design is cut into the strong leather soles of these boots, and represents two lotus blossoms (Pl. XXX: 1). The uppers are undecorated and laid in folds, so as to be better adaptable to the shape of the foot. A cross-border runs about 5 cm, above the sole, and to this leopard-skin shafts are joined. Only the upper edge is sewn over with straps, covered with tin and gold. The edge is surrounded with a woollen border.

The other pair of boots is much more complicated. They are real show-pieces. The

¹⁾ Rudenko 1950a.

²⁾ Rudenko 1950b.

leather soles, like the first pair, flat and without heels, are doubly framed with embroidery in wool (Pl. XXX: 3). Inside this, three rhomboids are embroidered on the sole, the largest under the ball of the foot, and the middle-sized one below the heel, again divided into many small rhomboids. The smallest rhomboid is under the arch of the foot. Twenty-four pyrite crystals are sewn into these rhomboids, on each foot. This pyrite must have been obtained as a by-product in mining. The upper leather of the boots is ornamented with embroidery and leather appliqué, which form a wonderful tendril pattern on the forepart of the foot (Pl. X.). Over the instep runs a cross-border, decorated with little swimming birds. The shaft above is decorated even more richly, and in this we chiefly come across the lotus motif. At some places, little glass beads are worked into the pattern. At the back, the boot-shaft is slit.

It is clear that such artistically decorated soles would only be shown off when sitting on a flat cushion with the feet doubled up.

There are felt socks, belonging to each pair of boots. From a later remark of Rudenko's, we learn that several different styles of cut were used in such socks. Along with those which are made entirely in one piece there are others with the sole attached. The back seam always runs somewhat sideways from the heel to avoid pressure.

Strewn about the ice-floor, were found more ornamented plaques with figure designs. They probably belonged to garments. Perhaps they also adorned the musical instruments, or some object in the inventory which had been destroyed. Embossed copper sheaths, covered with gold, are worth of notice. One represented two rams, opposite each other as in heraldry, with combs at the neck (Pl. IX: 1). The other, in the same position, showed two eagle-griffins (Pl. IX: 2), the bodies decked characteristically with half horse-shoes and circles.

The well known half horse-shoes are also used for the decoration of a plastic pendant in the form of a horse. This otherwise fully realistic object is cast and, further, worked with a chisel.

A very fine and equally realistic representation of an elk is of leather.

Near the wall of the coffin was found a thick leather strip decorated with a frieze of strutting cocks.

Little plaques, designed as griffins, reminiscent of Assyrian style, were probably sewn on to clothing. Other fragments show bodies of animals, arranged heraldically.

After all these things destined in the broadest sense for the adornment of the dead, we turn to the corpses themselves which, owing to mummification and freezing, had remained in an extraordinarily good condition.

The woman was about forty. She was tall and strong but gracefully built with delicate hands and feet. She certainly belongs to the Europoid type (Pl. XXXV: 2). The hair was shaved off presumably in conjunction with the trepanning, yet it seems that the plait, which was found in a case of its own, and consisted of soft black wavy hair (which does not fit in with the Mongoloid type) belonged to her.

The woman was, as far as could be seen, quite healthy except for alveolarpyorrhoea. There were no traces of a violent death to be seen. In the Ancient East, snake-poison was used in similar cases.

The changes in connection with the mummification are nevertheless very telling: The scalp had been folded back, on the right bone of the crown, the skull had then been cut open, the brain removed and the space filled with plant material. The piece of bone had been put back cleanly, and the scalp sewed down with horse hair. The same had been done to the belly. It was cut through from xiphoid to symphysis, the intestines had been removed and replaced with plant material. The belly had then been carefully sewed up again.

It is strange that similar cuts run from the buttocks to the thighs. A mass of muscle was removed here, and the hollowed-out space stuffed full. It is extremely questionable, whether this was done in connection with mummifying. It seems to me much more likely that the flesh which was removed formed eventually part of the mourning feast and was consumed among the funeral bake meats.

In favour of this idea, Herodotus reports,¹⁾ concerning the Issedones who were at least immediate neighbours of the Altaians, that they devoured their deceased fathers as part of the proceedings at the funeral feast. Injuries to the skull seem to lie at the door of the grave-robbers, and to have been inflicted by blows from an axe. The head is cut off, also the hands and feet, and even fingers are cut off the hand. The purpose of this is obvious, namely to get the precious jewellery.

The man was about sixty at the time of his death, very strongly built, and a typical Mongoloid with wide cheekbones (Pl. XXXV: 1). He was much less well preserved. Injuries to his skull could be seen, inflicted by the grave-robbers.

He had obviously been roughly handled even while still alive. In the right bone of the crown of the head there are two oval openings, and in the left, one. These were evidently made by picks. We do not know if he was fatally wounded earlier, and merely killed off by these blows, which caused the openings, or if these were decisive blows received in battle. The fact that they came from different directions speaks in favour of the latter. In any case, the old gentleman fell in battle.

In addition to this, he was scalped. A slash was made from ear to ear, and the scalp pulled off. After the dead man had been won back from the enemy, this damage was repaired, for the burial, by fitting a false scalp on to the bare place, and sewing it down firmly with horse hair.

In other ways the body has been handled similarly to that of the woman. As in her case, the skull has been trepanned and the belly opened, to remove the slightly decaying intestines. At the thighs one could not see that any muscle-substance had been removed, but a number of cuts were to be seen, through which some preserving liquid had presumably been inserted. A peculiar point is a false beard, which was bound over the shaved chin of the dead man (Pl. XXXV: 3). It was of horsehair, and hung down in a fringe, from a strip. It was so thickly dyed with black, that whole lumps of the dye could still be seen. A stiff black beard like this is immediately reminiscent of representations of kings in the Ancient East.

The most remarkable thing of all was, however, the tattooing which covered parts of the breast, back, and also the extremities (Pl. XI and XII). The tattoo marks had apparently been inserted under the skin by means of cuts and the introduction of soot, at a time when the individual was a good deal younger and considerably thinner. Unfortunately large portions of the skin are so badly preserved that the pattern could not be exactly confirmed. The best preserved parts, especially the arms and the right lower leg, show that the tattooing was carried out in fine and fantastic Animal Style. Whoever performed it must have been an exceptionally gifted artist, as he produced row after row of firm and bold compositions. A preference is shown for turning the animal's hind quarters upside down, so as to form the «contorted animal» (Pl. XI: 4, 5, Pl. XII: 2, 3, 5, 6), in the shape of a supine S-curve which we met also in purely ornamental compositions.

The objects which lay at the west wall of the chamber were only dug up and examined in the second excavation season in 1948. Besides a few figures of wood or leather, so far not described singly, and various small beads, yet another bronze mirror was found. It was in a leopard-skin case which was ornamented with small beads.

Much the most important find was a bronze cauldron, with a narrow foot and a handle

¹⁾ Herodotus, vol. IV, chapt. 26.

at each side, the handles covered with birchbark (Pl. XXVI: 1). The vessel had a layer of black felt at the bottom, and was filled with large stones, right to the edge. Between the stones, seeds of wild hemp were found, partly charred. As hemp contains fairly strong narcotic (hashish), the bronze kettle doubtless represents a burner for producing narcotic vapours. Above stood a peculiar structure, six-footed, made of little rods. A leather bottle ornamented with appliqué, was tied to one of the rods. In this, hemp seeds could again be confirmed (*Cannabis sativa* L., actually, *C. ruderalis* Janisch, obviously wild). The six-footed structure and the incense-bowl under it had a leather covering over them, ornamented at the edge and in the middle part with representations of winged lion-griffins falling upon elks. The covering was badly damaged and measured 1.50×1.75 m. All this evidently forms a whole set, which is actually an apparatus for inhalation.

In the south-west corner of the chamber were found leather remains with traces of a covering of lacquer, copper ornamented plaques in the form of animals opposite each other, as in heraldry, a piece of a neck-ring with carved griffin-heads, and a scrap of leather, sewn at the corners (an amulett?).

Here a stone table with four feet was found, which probably served in the offering of burnt sacrifices. It is doubtless one of those «portable altars» to which Tallgren¹⁾ has devoted his important study. Various remains of clothing and fragments of a narrow leather belt which had various metal parts to it came to light also.

In the outermost corner, under a second six-footed structure, covered with birchbark, was found another bronze burner on four feet, and also filled with stones. To one side-wall a short handle is fastened, to the others, loops for hanging up. Under the stones, hempseeds were also found.²⁾

Quite near the wall, a shirt of woven hemp was found. It should be identical with the object, the cut of which is described by Rudenko elsewhere, and which has already been mentioned together with the clothing of the dead.

In Rudenko's work³⁾ are included the results which the examination of textiles yielded, as to material and type of weaving.

Thus, in some scraps of once white woven stuff it was confirmed that they were of simple linen weave. The fibres were of plant stuff, their maximum diameter 25 micron.

Otherwise, felt and other stuffs were almost exclusively made of sheep's wool (with the exception of the man's shirt already mentioned). Rough wool, containing much hair, has only been discovered, so far, in the foundation-tissue of those narrow patterned strips which Rudenko calls «runner borders». The material used is, normally, very delicate. The diameter of the fibres is never more than 50 micron. Mostly it is between 12—27 micron, which is the same as the best quality sheep's wool used nowadays.

In the horses' burial place a narrow strip of sheepskin was found. The wool had only a strength of 10—14 micron. This confirmation is very important. A strip of such purely practical use was certainly not imported. Thus one may assume that the finer kinds of wool also were produced by the Altai population themselves.

Red woven stuffs from the horses' mortuary were also examined, which once formed saddlebow-covers. The number of threads per sq. cm. is 17×11 .

Examination of the runners already mentioned resulted in the fact that cross weaving was also known and used. Through this form of weaving an interesting range of patterns was achieved.

The narrow runners were, as already noted, sewn with borders at the edge. These

¹⁾ Tallgren 1937a.

²⁾ In a later article, Rudenko remarks that also melilot was used for narcotical purposes.

³⁾ Rudenko 1948, pp. 32—35.

evidently took the fancy of the grave-robbers, thus only insignificant remains of them are left. These borders consisted of a foundation tissue, shot with threads of different colours, which formed a peculiar pattern, which differs from any patterns known in Altai up till now. Rudenko names this technique «proto-gobelin» (Pl. XXVII: 1).

The carpet which covered the bottom of the coffin, also another carpet, only parts of which were found in different places in the chamber, consist of square pieces, about 29×42 cm. The outer edge and the joins were covered with felt. The loops, made by the drawing out of threads, were not in every case cut in the way which forms a fringe.

Various ribbons were examined. They were of wool and produced in a simple weaving technique.

In addition, we come across very complicated work. The woman's plait lay in a case which consisted of two tubes, one inside the other. Both pieces were of plaited wool, the inner one is a simple single-stitch net, but the outer one is like patterned crochet work.

The chemical examination showed that the dyes used were mostly of an indigo character.

Pazyryk Kurgan III.

While the final work on Kurgan II was still in progress, (the thawing could only be achieved gradually), the Pazyryk Kurgan III was opened in 1948.¹⁾

When the stone covering had been removed, it was realized that especially huge blocks had been used for its construction. In addition, the grave, on top, was sealed not only with tree trunks, but with trunks alternating with closely packed stones. In these layers of stones were found mouldy wooden shovels, seven wooden wheels cut from tree-trunks, also the remains of some light carriage. Traces of wooden panelling were confirmed, meant to prevent the walls of the trench from falling in.

Under the last layer of beams the usual structure of pillars was found, i.e. three upright posts on the north side, three on the south side bound together by strong cross-beams, on which rested the upper structure. Meanwhile it became clear that the preservation conditions were much more unfavourable in this trench than in the two others. The wood was mostly badly rotted.

Below the cross-beams, one came across the top layers of the outer chamber, namely shrubbery, then began larchbark and birchbark in thick and equal layers. The spaces between were stuffed with moss of kinds, which are still found in High Altai. From their condition one could assume that the burial place had been closed up in early summer.

At the level of the cross-beams, and owing to the weakening of the structure, partly inside the chamber, the skeletons of fourteen horses were found. Except for a few lumps of ice, which still contained hair and decayed flesh, all the more perishable parts were already destroyed. Nothing recognizable was left, even of the harness or saddling equipment. According to the remains, one could assume that the best and most richly harnessed horses lay in the east part. These particular horses were also furnished with masks. This confirmation is especially significant, as Rudenko states that he observed the same arrangement in the Kurgans I and II. Near the ones in the middle lay the remains of three small rod-shields already known from other kurgans. The saddles had, evidently, rather high saddle bows. The assumption that the wooden cheek-pieces represent show-pieces, but the bone ones, only, objects for daily use, found confirmation here. The ornamented plates (Pl. XXXVI: 1, 2, 4, 5) and other objects hung on to the harness straps were made of bone and often incrustated with lacquer.

¹⁾ Cf. Rudenko 1950a and 1950b.

The research party pressed on further, along the passage made by the robbers. Once again they came upon two chambers, one inside the other. Here, the eternal ice began. The space between the outer and inner walls was packed with stones on three sides.

The walls of the inner chamber (height 1.28 m.) had not been smoothed. Inside, a long coffin was found, made of a hollowed tree trunk with a very small opening (35 cm wide). It was empty. The skeleton lay on the floor, head to the east, flung out by the grave-robbers. The anatomic order of the bones was undisturbed, so the robbery had taken place, while the muscles and sinews were still intact. It was the skeleton of a strong middle-aged man. He must have been mummified as the skull showed signs of opening by trepanning. In a piece of ice, frozen hair off the head of the dead man was found. It was dark chestnut-brown and slightly curly. Thus, the man can hardly have been a Mongoloid. No further details about the skull are reported.

The rest of the inventory conformed, to a very great extent, to the kurgans already known. Once more, those peculiar dish-shaped tables were found, just as much destroyed and knocked to pieces, as the others. As the ribs and vertebrae of sheep and horses lay directly beside these fragments, we have further evidence of the fact that these tables must have served a purpose at meals. In the north corner, as in Kurgan II, a small drum made of cattle-horn, was found near a little table of this kind.

The find of a leather helmet lined with thin felt, at the east wall of the chamber — i.e., at the head end of the coffin — is significant. Close to it lay a wooden cushion of the same kind which served as a head-rest for the dead in the Kurgans I and II. Between the skeleton and the cushion lay wooden rods with openings at the thickened ends. They belonged to a burner set. At the skull of the skeleton lay twenty-four arrow-shafts. The heads were missing, perhaps the robbers took those with them. The shape of the shaft-ends shows that they must have had sockets. By the knee of the skeleton lay a little wooden shovel. As regards remains of clothing, scraps of fur-edging and silk were reported, also a silk purse and a square piece of ornamented woven silk. The appearance of silk is significant and differentiates this kurgan from those already excavated.

One can, once again, recognize the two layers of ice: 10 cm. clear ice at the bottom, and, over this, yellowish and dirty ice, which was formed from water which seeped in later.

In a newer work,¹⁾ Rudenko states further that the trousers of the buried man consisted of two layers of thin felt. They were very wide, and cut straight, thus not in the shape of riding trousers. The statements of Herodotus are in agreement with this shape, so are the Scythian representations of South Russia — also the famous gold plaques of the Siberian Collection.²⁾

Pazyryk Kurgan IV.

This kurgan, which Rudenko opened at the same time as Kurgans II and III, in 1948,³⁾ is much smaller than those already mentioned. Its through-measurement is only 24 m., height 1.40 m. It lies south of Kurgan III and north-east of Kurgans I and II, in a natural hollow, which was skilfully used by the builders to simplify working at the earth. After the removal of the top-layers, the trench was found to be in the form of a not quite regular square (5.30 × 5.60 m.) orientated towards the cardinal points. It lies not exactly in the centre of the kurgan, but a little towards the northwest, so that the robber gang, making for the middle, struck only the east wall.

The trench was filled with huge stone blocks. Kurgan III, therefore, represents an

¹⁾ Rudenko 1950b.

²⁾ Cf. Rostovtzeff 1929, Pl. XI Fig. 55.

³⁾ Rudenko 1950a, pp. 21—23.

intermediate type between Kurgans I and II on the one hand, and Kurgan IV on the other.

After the stone filling had been cleared away, a huge layer of beams was found. Under this, in the south part, stood a simple wooden chamber (not double). Beside this, in the north part of the trench, the horses were buried. On the ceiling of the chamber lay shrubbery and bark. The spaces between the vault and the wall of the trench were filled with stones, except on the north side, where the horses were deposited. Perhaps a structure like this one forms the first step towards the usual principle of filling the space between the walls of the inner and outer chamber with stones. The walls were carefully smoothed.

The chamber was filled with ice. After this had been thawed, two sarcophagi could be confirmed which had the well known loops at the narrow sides. They were made of huge larch trunks. In the larger one (3 m. long) at the south wall was found the skeleton of an elderly man, lying on the left side, the head towards the east. In the other coffin, which was 2 1/2 m. long, lay the skeleton of a girl of about fifteen, on the back, and likewise with the head towards the east. The skeletons were badly preserved, but postmortal trepanning is recognizable in both cases.

The coffin lids had been torn off by the grave robbers, and were found on the floor.

Among the objects dug up in the chamber and in the robbers' passage, feet of tables and table tops were again mostly found. Two of them were carved and covered with tin, but others were of very primitive work. One table top had the sockets missing, into which the feet were usually inserted. Instead of these, there were merely simple holes in the wood.

The peculiar wooden pillows were again found, also the little rods, which had been confirmed in Kurgan II, with the burner set.

Only a bird's head with reindeer horns is mentioned from among the artistic objects in the vault. This design represents the opposite form of the usual cervids with bird-heads on the antlers, which were found previously.

Outside the vault another trunk was found 1.40 m. long, in which steps were cut. This evidently served as a ladder, in building.

The fourteen horses, which were found after the removal of some layers of beams, were very much destroyed. Only snaffles and parts of trappings made of bronze and wood, the latter frequently covered with gold, could be found, but among these there were beautiful specimens in Animal Style (Pl. XXXVI: 3). A whip handle was unfortunately badly damaged.

Pazyryk Kurgan V. (and VI?).

Only one article written for the general public by Rudenko 1949 is to the hand, up to date, concerning Kurgans V. and VI.¹⁾ Unfortunately, supplementary facts from previous kurgans have been mingled into this survey, so that it is sometimes difficult to differentiate clearly, but it follows from this that the most important find of that year was made in Kurgan V.

This is a many-coloured velvet carpet, 4 m.² in size, of exceptionally fine work, which is not inferior to the best Turkmenian and Persian carpets. This carpet is richly decorated with plant ornaments, but bears also designs of griffins, riders, mounted on steeds or leading their horses, and designs of stags. Rudenko reports that the griffin is according to its workmanship of Anterior Asiatic origin. The horses are represented with typical Iranian harness, and have clipped manes, bunches of feathers as headdresses, and tails rolled in a spiral. The whole rider-composition is said to show closest relationship

¹⁾ Rudenko 1950b. Cf. Kiselev 1951, p. 392.

with the well known designs on Persepolis reliefs. The riders wore short closely fitting jackets, tight trousers, and soft tightly fitting boots.

Kiselev, who deviates somewhat in his description, finds it wholly superfluous to look for the parallels in far Iran. He thinks instead that the closest parallels are to be found in the material of the Tarim Basin.

From Kurgan VI., Rudenko reports the find of a mirror, which represents a Chinese import, and is said to belong to the end of the Chou Period. Kiselev, on the contrary, speaks of a mirror, which was found in Kurgan V., and which is exceptionally near to the Chinese type «TLT» (?). This form should, according to the statement of Chinese specialists, belong to no period earlier than the Tsin dynasty. I cannot decide whether there is here a question of two different mirrors or whether there has been a mistake in the number of the kurgan.

It is not stated in which kurgan a female headdress with wooden base and tiara-like upper structure was found, but presumably it was in one of the two latter, or such an important object would have been mentioned more often.

The Shibe Kurgan.

A giant burial is closely joined to the Pazyryk Kurgans, near Shibe on the Ursul river. Griaznov opened this in 1927 and worked at it in an incredibly short space of time.¹⁾ The mound consisted of huge crumbled rocks. It measured 45 m. through and was 2 m. high. Under it opened the trench, which was no less than 7 m. deep. On the bottom of this stood a block structure of larch beams, 5 m. long and 3 m. wide. The ceiling was also of larch beams, which were laid lengthwise. In this was, again, the actual smaller chamber. Between walls and ceiling, about 20 cm. free space remained. In the inner chamber stood the sarcophagus, a huge trough-shaped tree trunk.

The free space between trench wall and structure was filled with stones on three sides. Only the north wall remained free. Here lay fourteen horses.

Thirteen layers of beams were laid over three massive cross-beams above the chamber. The top-layer was covered with brushwood.

The construction of the grave is very reminiscent of the princely grave of Noin Ula. Only the burial of horses is missing in Noin Ula, and the space between the chambers is different.

Unfortunately this kurgan has also been robbed, but the horses, as so often, remained untouched by the robbers.

Only a few smaller objects, which had fallen off the pillaged clothing, are preserved. To judge from the remains, this grave must have been very rich indeed. Among these objects are fine golden buttons, small plaques for sewing on, like those which served to ornament clothing in the Black Sea district in the first century B. C. They include semi-circles, little rings, rhomboids, little stars with three or four points and ovals, as well as arrow-shaped objects. They are never completely of gold, but are of wood, covered only by a thin gold foil. One has the idea that the whole beauty of these objects has something fragile about it. They are reminiscent of theatrical illusion. On some larger plaques small heads and bodies of animals can be recognized, but the outline is emphasized, and only the silhouette of the former plastic design is preserved.

In the horses' burial place, larger objects were also present. On the one hand there are purely ornamental and geometric forms.²⁾ Cross-shaped gold fittings remind Griaznov of

¹⁾ Cf. Griaznov 1928a and 1928b (unfortunately nearly the same), Griaznov and Golomshtok 1933, p. 32, Kiselev 1949, pp. 182—184, Debets 1948, pp. 139—141.

²⁾ Illustrations in Griaznov 1928a and 1928b, also in Kiselev 1951, p. 337, Pl. XXX, Figs. 12—37.

the Han Period in China. Beads and tassel-holders are frequent. Another part is, however, carved out in Animal Style. The S-shaped psalia are again finished off with animal-heads. A wooden plate shows the body of a wild cat, and a fish with large scales is quite unique.

Griaznov recognizes two groups in this material. The one has much in common with the Sarmatian monuments of the lower Volga. The objects in Animal Style belong here. The small golden ornamental plaques also point in this direction, as does the intensive polychromy. The gold had often been decorated by a covering red dye, so that the gold itself is many-coloured.

In contrast to this, stand art-forms which are found again in Han China and are also noticeable in Noin Ula. Griaznov has quite rightly emphasized that the folk-art of today of most of the Turk peoples goes back to these rich forms. This means, in a practical sense, that connections with the Han art of China can be established for the actual art of today, by way of this find-group.

The relations with Chinese art are intensified by the fact that remains of lacquered cups were found in the kurgan. They were examined by Umehara and judged to belong to the time between 86—48 B. C.¹⁾

In the sarcophagus lay, now, the corpses of an old man and a child. Both were mummified in an especially noticeable way. Not only the intestines but also the whole flesh had been removed. It was as if dolls had been buried there, containing the bones of the dead and covered with their skin. We find something like this in Oglakhty,²⁾ that is, in the Tashtyk culture of the Minusinsk district. The openings in the bodies were carefully sewn up. The removal of the muscle flesh of the woman from the Pazyryk Kurgan II creates a certain parallel. Perhaps in the case of the Shibe Kurgan also, the flesh was divided among the relatives.

Debets³⁾ examined the skull of the old man. It has pronouncedly Mongoloid features, but it is dolichocephalic. This skull looks very like the skull which was found in the princely burial place at Noin Ula. Debets calls this type »Tungus-Manchurian«.

The Berel Kurgan.

As early as 1865, Radloff explored a large kurgan on the Berel-Steppe in South Altai.⁴⁾

Here also a superdimensional burial-site was found. The high rank of the dead was expressed by the fact that, to the north of the chamber four rows of four horses each were discovered. Eight of them (those above) were richly harnessed, the rest showed no signs of trappings.

In the south part, at the height of the horses, a half tree trunk was found, hollowed out, trough-like. Plastic griffin figures of copper were fastened to this. On the longer sides distinct right-angles of stone were marked out. Underneath, deep down in the trench were a much damaged human skeleton, also the remains of a seventeenth horse.

Zakharov, who had not yet the materials from the Pazyryk Kurgans at his disposal, took the trough for part of the ceiling and the griffin figures for guardians of the grave, set to prevent any breaking in to the chamber beneath. Kiselev thinks the trough was the coffin of the dead, which the grave-robbers had dragged up to the level of the horses. Against this, objection can be raised that it is incomprehensible why the grave-robbers

¹⁾ First mentioned by Griaznov and Golomshtok 1933.

²⁾ Cf. Tallgren 1937b.

³⁾ Debets 1948, pp. 139—145.

⁴⁾ Cf. Radloff, OAK 1865, and Radloff 1884, pp. 103—116. Zakharov 1928, pp. 133—140. Kiselev 1949, pp. 184—185.

left the copper figures just as they found them. It seems likelier that they broke into the vault through a passage at the side, and thus did not discover the figures which lay higher up at the level of the horses. It is impossible to arrive at a decision by means of Radloff's description, which, even in the original German version, is very hard to understand. The presence of a horse in the vault, which leads to conclusions that the ritual was different, points against Kiselev's opinion.

Apart from the huge griffin figures, which already represent, through the high combs, a later form, the most significant finds were in the horses' burial place. Wonderfully realistic stag heads formed part of the harness. Kiselev thinks the influence of Graeco-Bactrian art can be confirmed by these works of art. According to his opinion, a horned hypocamp points to the same connection. Objects somewhat horseshoe-shaped, of birch-bark, with crescent-shaped carving and covered with gold foil adorned the front saddle bow and find a parallel in similar specimens from Han-time China.

An iron dagger was also reported, which is reminiscent of an old Scythian form.

The Katanda Kurgan.

Another great kurgan was explored by Radloff, also in 1865, near the village of Katanda, on the river of the same name, at the foot of the Belukha mountain (South Altai).¹⁾

Even in the mound (2.20 m. high, 30 m. through), bones of six horses, badly disturbed human skeletons, and various inventory objects were found, which seem to belong to later burials from the 7th—10th century A. D. The trench measured only 4 × 5 m. It was filled first with earth, then deeper down, with large slabs. Between, remains of human skeletons and horse bones were found. At a depth of 3.50 m. a wooden structure was discovered, the narrower sides of which were made of short round pieces of wood arranged like a wood-pile. Lengthwise, the structure consisted of larchbeams, and so, presumably, did the much-destroyed ceiling. Strangely enough, under this came again large blocks of rocks, held up by cross-supports, the ends of which lay on steps of the north and south wall. Underneath there was a free space. On the floor of the shaft (6.40 m. deep), two couches stood in the ground-water. They were hewed out of massive trunks with an axe. On them lay two human skeletons, heads to the east. When touched, they fell to pieces in dust. Little square bronze plaques lay around them, overlaid with gold, also scraps of Chinese silk.

The point of greatest interest in the whole burial place was two bundles of clothing, frozen into lumps of ice. These were found on both cross-supports in the upper part of the chamber.

The one contained a wide fur-coat. Facings and sleeves were of ermine, dyed alternatively green, yellow and brown, so that the result was a fish-scale pattern. In addition, the scales were edged with gold leaf. The skirts of the coat, the borders and the shoulder parts were of leather, and had been once thickly sewn with little wooden squares, also covered with gold leaf. All together, there were once 8 000 little wooden plaques and about 1 000 larger and 2 000 smaller leather patches, which were all covered with gold, and once must have made an overpowering impression, as if they were all real gold. Inside, the coat was lined with skin, and the sleeves were so long and tight, that they could only have been there for decorative purposes. This coat must have been worn hanging from the shoulders. Rudenko finds a similarity, in cut and ornamentation, to the festive costumes of important personages in the Achaemenid Iran.

¹⁾ Descriptions by Radloff 1884, pp. 68—143, Russian translation in the *Sibirskie drevnosti* series. Further Minns 1913, pp. 248—250, Zakharov 1925, pp. 37—57, Zakharov 1926b, Vidonova 1938, pp. 169—178, Kiselev 1949, pp. 185—189.

In the second bundle a fur garment was also found. It was not unlike a modern tail-coat with very long tails. The tail-coat had also once been sewn with gold leaf, but this was missing, and had perhaps been torn off by the robbers (?). Even Zakharov, who had for a long time concerned himself with Radloff's rather incomprehensible report, found the problem as to how this can agree with the condition of preservation of the kurgan, impossible to solve. This tail-coat is doubtless very like the famous »Tungus tail-coat», which was certainly, once, worn over an extensive area.

In the fur coat, various other things were wrapped up. Among them was found, first, a stomacher of fur, covered with silk and sewn over with gold leaf. This again fits in exactly with the modern Tungus »tails», which are always supplemented by stomachers of this kind. In addition, and strangely enough, wooden sculptures were found, some of which represented saddled horses. They were probably intended to be attached to the stomacher, as some bits of ribbon were discovered, remains of which were sewn on to the stomacher. Such a fashion, of wearing horse-figures as breast-ornaments, would correspond, to an amazing extent, with modern Shaman clothing. It is, however, possible that the wooden horses were a substitute for buried horses, which were not found in this grave.

Two of the figures seem always to belong together. We come across upright as well as supine figures. On the standing horses swellings run cross-wise over the back and represent saddle bows. They show traces of gold leaf, and so do the hooves. The heads of the animals are turned, obviously towards the spectator. The manes are close-clipped and stand up. This was also observed in the case of the Pazyryk horses. The skulls of the horses had four openings. Two were evidently for the ears, and the two others were fairly certainly used to take in antlers. Again we come across, here, a melting together of the cervid and the equid. The sculpturing is of great artistic value. Trever compares it with the finds from Noin Ula, but Eding compares it with the art of the northern forest zone, which we know from the Uralic finds.¹⁾

Near the horses was found a little statuette of a fantastic animal, the body of which is rather like that of a supine horse, though it has the head of a griffin.

To the same series belongs a little wood-relief with a scene of a fight between animals. On this is a cat-like wild beast with antlers, the points of which finish off as birds' heads. Another smaller, beast of prey, is seizing the larger one by the throat. Near this, two more beast-heads were found, with long muzzles and spiral stylized nostrils.

A square wooden plaque was sewn to a piece of a strap. It represents the head of an animal. Zakharov identifies it as a head of cattle. Kiselev thinks of a connection with the Chinese T'ao-t'ieh masks.

A famous object is a wooden hump which, on the outer side, is carved in the design of two fantastic animals swallowing each other. The two animals together form a circle and show close relationship to Chinese art.

In his summary Kiselev states that he sees the closest relationship between these works of art and those of the Treasure of Novochoerkask. He considers this kurgan of rather more recent origin than Pazyryk I.

GENERAL SURVEY.

Taking the data discussed in the foregoing paper as a foundation, I should now like to attempt to present a picture of the material and mental equipment which Altai, in particular, possessed during the last centuries before the birth of Christ.

¹⁾ Trever 1932.

Eding 1940.

The actual *dwelling*s of the Altai people are only known to us by means of very exiguous dwelling-sites in the anterior, and from these it is impossible to tell for certain whether they were typical of the housing conditions of the whole population. Since Griaznov's researches¹⁾ there has been no lack of attempt to form conclusions as to the way people were housed, from the manner in which the great kurgans, which really form log-houses for the dead, were built. In any case, no one could have erected these kurgans, who had not been thoroughly acquainted with the technique of building log-cabins. The existence of such houses is, as regards the Minusinsk Basin, actually proved by means of a rock carving, the Boiarskaia Pisanitsa.²⁾ Thus there is the probability that such wooden buildings also existed in Altai.³⁾

The same rock picture shows also carvings which were explained as less stable yurt-like dwellings. It is not to be expected that one could obtain information about such structures by means of excavations. But in our data we have enough points to go by, in order, at least, to presume that migration took place according to season. Perhaps the Altai people kept their flocks and herds in the mountains in summer and on the plains in winter, as is the custom in mountainous countries in Europe today. In favour of this possibility, there are the oval tables which can be taken to pieces and put together again, the wooden vessels, the seats on flat cushions, the unusual development of wall-hangings. It is only necessary to visualize the wooden walls of the burial chambers reduced to a thin scaffolding, in order to see the principle of a yurt.

Correspondingly, the *furnishing* of the houses consists mostly of textiles, felt, and leather objects. From the Pazyryk Kurgans we know of cushions, carpets, wall-hangings, bags and purses in astonishing abundance. It is typical of the preponderance of soft materials that even bottles are made of leather, also that pottery has leather adhering to it, and, especially, that bendable metals were preferred, so thin that they could be treated as leather and combined with it. All these materials were combined with complete virtuosity, and treated with an astonishing variation of technique. Instinct for style and artistic interest are essentially incorporated in this material. Wood takes a back seat in the household inventory, although in this, also, amazingly artistic results were achieved, as we see in simple objects for daily use, like the little tables. Rudenko considers that their shape is borrowed from the Orient, and that the Altai people became acquainted with such tables while they were serving the Persian kings.⁴⁾

The *pottery* does not represent the artistic trend of the time in the same way. In the anterior it is possible to make a survey of its development. It leads from local tradition to an adoption of East Sarmatian and Tagar elements, and, finally, to a clearly marked degeneration in pattern and material. The reason for this fall can be grasped in the Pazyryk Kurgans. It is explained by the appearance of wooden vessels, better suited to a nomadic or half-nomadic mode of life.

One of the wooden vessels dug up in the Pazyryk Kurgan II shows connections which reach far towards the West, as far as the Novocherkask gold vessel.⁵⁾ The other, the

¹⁾ Griaznov 1928a and 1928b.

²⁾ Griaznov 1933. The rock carving must belong to this time as «Scythian» cauldrons are pictured next the houses.

³⁾ The rock carvings of Altai are not used for historical purposes, neither by Kiselev, nor by Griaznov. Khoroshikh's publication (1947) is of preliminary character and does not contain many illustrations. Thus I had to decide not to include this material.

⁴⁾ We may compare the little tables from the Lop-nor territory. Bergman 1939, Pl. 19: 1—3, Pl. 27: 1 and 2.

⁵⁾ Cf. Kiselev 1951, p. 392.

handle of which is bent downwards, finds its parallel in the Tashtyk Culture.¹⁾ It seems as if the occurrence in the Pazyryk Kurgan is of somewhat earlier date than in the Minusinsk graves. This is an important observation, regarding the origin of the Tashtyk Culture.

The felt rings which belong to these wooden vessels give us to understand how the round bottom came into general use again.

Only quite a few types of pottery, for instance, vase-like vessels, persist really obstinately. We find them still in those kurgans, where the complete metal inventory has been taken over from the Minusinsk Basin.

The fact that painted vessels appear, is astonishing. They come upon the scene for the first time since the Afanasievo Culture. Kiselev naturally thinks, here, of a foreign influence without being able to say exactly whence it comes.

Metal vessels we only know as in use as burners for ritual purposes in the Pazyryk Kurgan II. Their shape, however, is so little specialized that they could have been employed equally easily (without the stone filling) as objects of practical use.

Of the *tools*, which were used to produce the houses and their inventories, we know very little. The development of knives runs parallel with the development in the Minusinsk Basin. The Aragal Kurgan even contains a miniature knife, which belongs to the Late Tagar Culture. It is important that, through the find of a sheath, the technical reason for the inarticulate shape of the Tagar knives is made clear.

We know of no find of an axe in a grave. Only in Pazyryk Kurgan I the broken handle of a socketed celt was found, and that had presumably been brought there by the grave-robbers. In this connection it is not clear whether the grave-robbers belonged to the stock in question. Rudenko believes, however, according to the traces of blows, that socketed celts can be presumed to have been used for building the chamber. Probably many stray finds which conform to a Late Tagar type, belong to this time.

Bones and especially horn were used, continuously, for a long time. Here, I am thinking of the antler-hammer, found in Pazyryk Kurgan II, and of the chisel found in Pazyryk Kurgan IV. Simple wooden shovels were used, thus, even in earth works which presented great difficulties. In connection with this, one should recollect that almost incredible results were achieved in moving stones, in primitive mining (e. g. in the Hallstatt Salt Mines), with wooden shovels.

Only in the anterior of Altai were objects connected with the daily work of the women placed in the graves. There we know of stone grinders and spinning whorls. The «little man» — and woman — and their needs, seem to predominate there.

The *musical instruments* of the Pazyryk Kurgans form a special group inside the «peace» inventory. The drums,²⁾ with their hour-glass shape show no connections with the Shamans' drums, which probably had their roots in the forest zone. Their shape is more nearly related to the South. Such forms are still owned by inhabitants of Persia and Afghanistan. The finding of string instruments is equally astonishing. Rudenko compared them with Ancient Oriental types. Their significance for modern ethnology consists of the fact that, for the first time a plausible linking-up occurs, of the Ob-Ugrian lyre, which, in the far North, seemed so «lost».³⁾

The mirror is, naturally, much the easiest object, among the ladies' *articles of dress*, to recognize. The one found in Vavilonka already has the medal shape which is typical of

¹⁾ e. g. in the Oglakhty finds (Tallgren 1937b, p. 81 Fig. 13), and in the Uibat finds (Kiselev 1951, p. 419 and Pl. XXXVII Fig. 7).

²⁾ Cf. reproductions of drums on wall-paintings in Toprak-kala (Khorezm) from the first centuries A. D. See Tolstov 1948a, p. 177.

³⁾ Cf. Väisänen 1931.

the Pazyryk time, but it has no loop on the handle, thus it becomes connected with the mirrors of the lower Volga territory. This dates it as belonging, at latest, to the 4th century B. C. Mirrors, the handles of which attached at the side mostly represent a standing animal, are characteristic of the whole subsequent period, about up till the time of the birth of Christ. They can be compared with finds of the Late Tagar time, or with similar finds from the Ordos territory.¹⁾ Rudenko calls the silver mirror of the Pazyryk Kurgan II, with its plastic back-plate and horn handle «unique». Kiselev²⁾ and Smirnov³⁾ have rightly pointed out that we know this type from the Sarmatian territory, where it belongs to the time around the 1st century B. C. This does not fit in at all with Rudenko's dating of the Pazyryk Kurgans.

Another mirror will, in the future, become still more archaeologically important. Rudenko found this one in the Pazyryk Kurgan V. or VI. According to the mutual agreement of statements made by all who worked in connection with this,⁴⁾ it should be an object imported from China. Kiselev adds the statement that it should belong to the «TLT» type,⁵⁾ and in any case should not be classified as earlier than Ts'in.

In two cases the mirrors belonged to actual «necessaires», in Karakol, to a wooden case, and in Pazyryk Kurgan II to a leather bag full of surprises.

We also know of little one-sided horn combs. The one of these which was found in the I Akonur Kurgan Nr. 5 has a spiral pattern which Griaznov traces back to the Chou art of China.

Among the most decisive *weapons* used in campaigns, man against man, was undoubtedly the pick. Its development runs completely parallel to that of the Late Tagar type. In the Aragol Kurgan, we find it again in miniature form. In the pillaged kurgans it is, naturally, missing, but, instead, we find impressive traces of it on the horses, and on the slaughtered prince in Pazyryk Kurgan II.

The lines of development of the daggers and swords run otherwise. In the Tuiakhta group we meet with what are, without doubt, the oldest forms within the Pazyryk Period. These are rather massive swords, with iron blades and bronze handles, which differ strongly from the elegant Tagar shapes, and are to be compared with the Scythian and Sarmatian, especially, with the massive akinakes of the Persepolis Reliefs. Only later on do we find an approach to the Tagar types, and in the Aragol Kurgan the pure Late Tagar miniature dagger appears again.

Strangely enough, in spite of the many Sarmatian parallels, with which we have continually met so far, the Sarmatian sword is completely missing in its typical forms. Is the pillaging of the graves to be held responsible for this, or is it a question of an essential difference?

To the sword-set belonged bronze or iron hooks, which served to fasten swords to belts, also sharpening-stones, bored through. Both objects already appear in the Maiemiric Period, and incorporate, to a certain extent, a local component.

Spears are completely missing from our find-material. In consideration of the fact that the spear was the cherished weapon of the mounted Parthians and Sarmatians⁶⁾, we should have expected that a spear would have been found, or at least shaft-remains of a spear, in the larger kurgans, and a spear-head, now and then, in the poorer burials of the anterior. But we find nothing of the kind.

¹⁾ See Salmony 1933, Pl. XLI: 1 and 2, and Kiselev 1949, Pl. XXI, Figs. 1—3, 5, 7, 9.

²⁾ Kiselev 1951, p. 392.

³⁾ Smirnov 1950, p. 103.

⁴⁾ Rudenko 1950b, p. 157. Kiselev and some Chinese scientists quoted by him. Cf. Kiselev 1951, p. 392.

⁵⁾ Blavatskii 1949, p. 98.

The chief weapons remained the bow and arrow. The most archaic bronze arrow-heads with socket are known to us again from the Tuiakhta group. They are related to the arrow-heads of the 5th and 4th centuries B. C., from the Volga and Ural regions, and, like the swords, they re-appear also in Persia. Later, the socketed arrow-head recedes into the background. In its place we find the long drawn-out bronze, iron and bone types with a tang, which all occur also in the lower Volga region. Kiselev thinks there is no immediate connection between the two districts, but rather that it was probably a question of borrowing from a common source, and he points out that the arrow-heads with tangs seem to have originated from an eastern centre within the Steppes.¹⁾ It is very typical of the cultural development of Siberia during the migration period, that all later arrow-heads go back to such arrow-heads, i.e. with tang.

From the great kurgans of High Altai we know of hardly any arrow-heads, so that Kiselev already presumed no arrows were given to the dead, in order to prevent long distance attacks from the other world. As, however, arrow-shafts, at least, were found, the lack may be due to the pillaging.

As to defensive weapons, we only know of a leather helmet from Pazyryk Kurgan III, and the little rod-shields, concerning which we do not even know, exactly, whether they were part of armaments at all. Armour-remains are not known to us. This is in complete agreement with the lack of spears and long swords, as armour-plating was used to carry through a «push» on the part of lancers and sword fighters, clean through a rain of arrows.

Thus all elements typical of early Sarmatian weapons are missing: long swords, spears, and armour-plating. How Kiselev²⁾ can claim, in combination with Tolstov's theory, that Altai also was strongly influenced by the Sarmatian expansion, is not clear to me. It seems much more likely that the relations with Sarmatians, of which we actually know, were brought about by trade, rather than by contacts made by means of campaigns. The fact that long swords retreated into the background, about the time of the birth of Christ, in Sarmatia, can be explained by the influence of the East, with its improved bows.³⁾

In the matter of *harness*, we can again differentiate a relatively small group, which has retained essential characteristics of the Maiemiric Period. The kurgans of the Tuiakhta group, together with Vavilonka, are representative of this. In their harness, a great part is played, for example, by the ornamented tusks, and by the cross-shaped bored buttons, and iron psalia, bored through twice instead of three times. The connections of this group point to the West, to Sarmatia, and to Pontic Scythia. Later on, the psalia of integral form, with a few exceptions, made of iron, establish themselves. We find the nearest parallels on the lower Volga. The wooden psalia, beautifully carried out in Animal Style, and covered with gold leaf, are truly ostentatious pieces. Throughout the whole period, the horn psalia never died out. Even quite simple snaffles made of perishable material appeared, as we can prove from the Pazyryk finds which were unique in this respect.

Sometimes the horses had, as extras, wonderful forehead plates. It is possible that the masks merely represent a luxury version of these forehead plates, especially fantastically carried out. Again and again we find here the design of fighting animals. By a chance which involves difficult consequences, the best preserved of the horse-masks from Pazyryk Kurgan I is crowned with reindeer antlers. This led to widespread speculations.

¹⁾ For the extremely early appearance of the tang-group in the East, cf. the arrowheads from An-yang (Cr  el 1936, Pl. VIII).

²⁾ Kiselev 1951, pp. 319—321.

³⁾ Smirnov 1950, p. 111.

Marr¹⁾ presumed, according to linguistic considerations, that the reindeer was the first animal to carry human beings, and was only later replaced by the horse. In this mask he saw a brilliant confirmation of his theory. He thinks we might be able to see clearly the extent to which the reindeer was preserved in customs appertaining to cults, and that the mask represents a kind of compromise. This theory (without mention of Marr) is repeated again and again, even as late as Kiselev's second edition.²⁾

The leather part of the harness was decorated with numerous ornamental plaques and pendants, in which, after a short and strict initial period (recognizable in the Tuiakhta Kurgans) the whole spectrum of the Altai relationships appears before our eyes. Ancient Oriental palmettes are found beside abstract spiral ornaments, whose origin in China has already been established by Griaznov. Human heads are perhaps Graeco-Bactrian. But the most amazing find is that of full plastics, e. g. the supine beasts of prey in the Pazyryk Kurgan II. They are reminiscent of many woodcarvings in the East Urals.

The *saddles*, which were found in Pazyryk Kurgan I, consisted only of felt coverings and saddle cushions. The upper coverings bore designs in Animal Style, in which the northern elk was next to a lion-griffin suggestive of Assyria. The cushions were stuffed with reindeer hair(?), and have played an important part in the discussion concerning the relationship of reindeer-breeding to horse-breeding. In these cushions one seemed to recognize original reindeer saddles, not entirely suitable for horses. However, today we know of many more solid saddles with strong saddle bows, from the same period.

The whips of the Pazyryk Kurgans show close connection with Sarmatian specimens.

It is important that remains of a four-wheeled chariot apparently used with four horses, came to light in the latest Pazyryk excavations, along with very primitive cart-wheels, which were already known, from Pazyryk Kurgan I. The statement of Herodotus, also that of the Chinese, who tell that the cart was used in Ancient Central Asia has been confirmed by this.

Our knowledge of *clothing* has been obtained only by means of the great kurgans, and is not extensive. The cut of a shirt which was different from that of one found in Noin Ula, is described. Rudenko sees here a sign of a difference in period between the two finds. Yet it is difficult to see why two cuts of shirt should not have existed at the same time, next to each other.

As to trousers, we know of tight-fitting ones of Old Scythian cut, next to wide ones, cut out of two layers of felt.³⁾ Soft low-cut leather boots certainly belonged to these trousers.

Actually, we only know of boots from those of the woman in the Pazyryk Kurgan II. These have already been discussed in detail, because of their very great artistic value, and it has been mentioned that the ornamentation could only be fully appreciated when the wearer was sitting down, cross-legged.

The most remarkable peculiarities of the fur-coat from Pazyryk Kurgan II are the long very decorative sleeves. Rudenko compares the coat with the kind of garment worn by a high official on the Persepolis Frieze,⁴⁾ and sees in this, one of those Persian connections which he pursues so attentively. Perhaps, however, the Persian coats and the Altai coat have merely a common original form, i. e., the simple herdsman's coat, hung over the shoulders which can be followed right up into the present time.

¹⁾ Marr 1926. See also Meshchaninov 1932.

²⁾ Cf. Kiselev 1949, p. 207, with Kiselev 1951, p. 375.

³⁾ A cut of this kind is represented in Rostovtzeff, 1929, Pl. XI Fig. 55. "Centre."

⁴⁾ Cf. the often repeated reproduction, e. g. in Dalton 1905, p. 16 Fig. 9; according to Flandin and Coste, vol. II, pl. 95.

The origin of another article of clothing, which we called the «tail-coat», is much clearer. Kiselev compares it¹⁾ with the modern costume of the East Taiga, the «Tungus tail-coat». Actually, the same stomacher, typical of the Tungus costume, was also found in the same kurgan (Katanda). This stomacher played an important part in the question of the southern origin of the Tungus costume. It was considered to be a degenerated apron, and was traced back to the clothing-forms of Middle China. Today it is emphasized by Russian excavators that the people of the Glazkovo Culture already wore such «tail-coats», and that this article of apparel was not limited to the Tungus but can be followed up as far as the North American Eskimos. The reason for the wide expansion in time and distance is probably that the combination of tail-coat and stomacher in the middle, which leaves each foot free, represents an excellent form of clothing for the Taiga hunters, who had to undertake long tramps every day. In a functional sense, the «tail-coat» is rather like a French infantry overcoat, with the corners turned back.

Today this costume is seen in far districts only as the costume of the Shamans, and the stomacher is hung with animal figures and other symbols. Thus it is all the more astonishing, that hangings consisting of animal figures were also found on the stomacher from the Katanda Kurgan. In any case, in the Katanda Kurgan, we have to do with a form of clothing which, according to its type, must be pursued back into the forest zone of the North.

Belts have been identified already in the Tuiakhta group by means of their simple, undecorated, metal equipments. Later these were replaced by ornamental plates in Animal Style, and in this, the Kumurtuk Kurgan perhaps betrays a Bactrian influence. The most prominent objects are the ornamental plaques from the Pazyryk Kurgan II. These silver plaques, of great artistic value, served, at the same time, another purpose. They strengthened the points where reins, to which objects were hung, went off from the belt. Thus we have to do with a whole set of straps or reins, playing a most important and characteristic part at the time of the migrations. The leather, in the belt, is strengthened by means of a complicated technique. In this, in one case, a tendril-pattern is formed, which shows a striking similarity to the decorative handle-terminals of some Tagar knives.²⁾ As these knives were exclusively of bronze, Tallgren³⁾ allotted them to the 4th century B. C. This would be of very great importance to the dating of Kurgan II, but cannot be upheld, without further investigation, as these knives with the tendril patterns have not been closely examined. They must have some foreign connection or other. Their style, in any case, contradicts the Animal Style of the Tagar Period completely. I shall return later to the ingenious interpretation, which Strzygowski linked with these style-elements.

The needle-like belt-pendants of the Tuiakhta group are not confirmed in any later kurgan. Thus their connection with similar shapes in Kudyrga is in a weak position.

The spangles, frequently sewn on to the garments, find convincing parallels which also lead to dating, in the ostentatious burial places of the Black Sea area, about the time of the birth of Christ.

We come, now, to *jewellery*. The headdresses worn by, or buried with the dead, are especially interesting. We know of several types of construction:

- 1) A woollen band, to which a row of gilded leather figures adhere, and from which ornamented strips of fur hang down.
- 2) Perhaps plastic animal figures belonged to a similar object.
- 3) A tiara of gold leaf raised above a wooden ring.

¹⁾ following the detailed study of Vidonova 1938.

²⁾ Martin 1893, Pl. 17.

³⁾ After Strzygowski 1917, pp. 108—113.

4) In addition to this, there appears, in the Iakonur Kurgan Nr. 5, a band-like diadem decorated with gold leaf.

The first are certainly to be connected with the heavy golden diadem from the Novocherkassk Treasure (Pl. XXXII: 1). As this treasure most certainly shows signs of Asiatic influence, we must look for the explanation of this peculiar decorative principle in Asia, and must assume, that the very much simpler diadems of Altai approach, both, geographically and technically, much more closely to the original form.

Precisely in the face of the peculiar decoration with strutting cocks, stag-figures and griffins, we must ask ourselves whether they do not express some particular religious idea. Perhaps they hint at the connection of the wearer with protective animal spirits. In the spiral design found in the Iakonur Kurgan Nr. 5, as regards the meaning of such motif in the ethnology of East Asia, we could imagine that some solar idea played a part.

It seems to me that such considerations are important, because they would make it clear, how the principle of a crown, individual to each wearer, such as predominates among the Steppe peoples, was arrived at. Every Khorezmian prince, also every Sassanid ruler, possessed his own often fantastic «crown», which varied very much from ruler to ruler. Sometimes animal designs are present. If a religious idea is expressed in these crowns, than the changes are clear.¹⁾

The ear-rings are of thin gold wire, and because of their delicacy, were easily overlooked by the robbers. They are of very great chronological importance. They were found not only in the Late Tagar Culture of the Minusinsk Basin, but also in a grave of the Hun period of Transbaikalia, dated by means of Chinese coins, thus they supply the much sought-after chronological level.

Besides this, ear-rings were furnished with pendants, in which cells were kept for the reception of various coloured stones. This is one of the few proofs that this so typically Sarmatian technique²⁾ was also known in Altai.

The neck-rings begin with heavy massive forms, of bronze, presumably also of gold, and are replaced by hollow gold-covered bent tubes in the later kurgans. This is typical of the general trend of artistic development. If the animal figures at the ends have been exchanged, as Kiselev imagines, we have then a further reason to believe that the attitude towards the animal had not been free from a certain amount of religious tension.

The breast ornaments, so popular in ancient times, are not apparent, but perhaps beads and buttons, found scattered about, belonged to objects such as these.

Only very primitive arm-rings were found, that is to say, bent bronze rods. Yet, as the hands in the Pazyryk Kurgan II were hacked off at the wrists, arm-rings probably had their place among the ostentatious jewellery of the upper classes.

Conclusions concerning finger-rings, can only be drawn from the hacked-off fingers in the Pazyryk Kurgan II. We must imagine them to have been like those found in the Oxus Treasure.

Buttons were still more rare. Their most expansive time was that between the Middle and Late Bronze.

We come across beads of the most varied material, in several shapes. They are already present, in glass of many colours, in the Tuiakhta group. These peculiar «eye-beads» are also known to us from China, Lo-yang, and the Sarmatian region. It has been pointed out that they represent a western import in China. Thus Altai yields one of the necessary links. Cowrie shells show the same west-eastern expansion, and characteristically, paste

¹⁾ It is possible that the Shaman crowns found in Korea, are also individual and symbolic headdresses of this kind. The use of similar forms in Shamanism is certainly secondary. Shamanism adopted many forms which were primarily in common use and above all, it took over royal rites.

²⁾ The existence of this technique is made probable by the many-coloured felt-appliqués.

imitations appear in the Late Tagar Minusinsk Basin. In the Late Chou Period they were used as money.

The sporadically discovered gold beads, appearing in the same way in the Late Tagar complexes of the Minusinsk Basin and in the Noin Ula group made it possible again to recognize a chronological level. In Altai we find, among the paste beads, shapes which, later, become characteristic of the Tashtyk Period. Unfortunately illustrations and descriptions do not permit precise deductions to be made concerning the relationships.

It is striking, how greatly the late graves of the anterior increase in riches, and contain more and more of these little decorative objects.

Even when one considers the gold spangles not only as a principle of clothing or ornamentation, but as single specimens, the connection with Pontus still remains upheld, and even further strengthened.

I should like here to add a mention of some principles of ornamentation, which normally cannot be identified as regards prehistoric times.¹⁾ The appearance of *tattooing*²⁾ in Pazyryk Kurgan II is a great surprise, as otherwise, the very reliable statement of Herodotus reports, regarding the eastern neighbours of the Pontic Scyths, not tattooing, but at the most, painting of the body. The tattooing will lie at our disposal, as chief testimony, in the discussion of the artistic ideas of the Altai people.

Rudenko, who has described the tattooing in a detailed article.³⁾, tried, above all, to use them for the purpose of exact determination of the gold treasures of the Siberian Collection of Peter the Great. He has compared the famous gold plaques down to the stylistic details, with the single designs.⁴⁾ According to him, the antlers ending in bird-heads, the comb-like claws, and the «contorted animals» approach each other most closely. Against this it can be said that some animals, which appear on those gold-plaques, were never observed among the Altai monuments, e. g. the snake. The applications on the felt carpets of Noin Ula show, at times, much more detailed agreement. Thus it remains doubtful to me, whether or not it was really the Altai kurgans, from which the gold plaques originated. The whole Sakian territory comes into question, regarding the origin of these plaques, and this territory probably had closer relations with the East than Altai itself. The Altai kurgans were plundered at such an early date and so systematically, that no object in the Siberian Collection can have originated from the kurgan groups so far opened.

The *false beard*, with the intensively black dye, possibly had its origin in royal apparel which had its roots in the Ancient Orient. It is, however, also possible, that a Mongoloid, like the deceased in the Pazyryk Kurgan II, had too scanty and unimpressive a beard, and thus he fell short of the traditional ideal as a royal personage and was obliged to fall back upon artificial aid.

The *coiffure* of the woman is determined by the plait found in a case. The plait may have been a general part of the mortuary gifts, as we know of gifts of plaits from the Tashtyk Culture.⁵⁾ (о́плетка !)

When we extract the artistic essence from all these objects, we see at once that all objects of everyday life, whether they are of wool, felt, leather, horn or wood, are handled according to the same methods. This shows, that it is not a question of imported goods, apart from the few easily recognized exceptions.

¹⁾ One exception would be the signs of tattooings on neolithic idols of Eastern Europe.

²⁾ From Assyria, of course, tattooing is known (Rudenko 1949c, p. 133—134).

³⁾ Rudenko 1949c.

⁴⁾ Here it is especially a question of the objects Nrs. 53—68, from Tolstoi's and Kondakov's well-known publication.

⁵⁾ Tallgren 1937b.

It is, however, only the same technical principle, that is to say, rich combination of various materials,¹⁾ but not the same style. With a little pedantry, one can differentiate:

1) A realistic Animal Style, which is expressed, e. g., by the running rams, in the tattooing.

2) A fantastic Animal Style, which is found, e. g., in the rest of the tattooing.

3) Master-craftsmanship in realistic full-plastic, rare in Pontic Scythian art. E. g. in Katanda.

Alongside these come also, especially among the textiles:

4) Pure geometrical patterns,

5) Plant motifs,

6) Abstract geometrical patterns, remotely derived from plants, among them, occasionally, «lobated tendrils».

7) Spiral patterns, e. g. in the Iakonur diadem.

8) A tendency towards realistic human designs, as noticeable, for instance, in the carpet in the Pazyryk Kurgan V., or the men's heads on the ornamentation plates from Pazyryk Kurgan I.

Polychromy plays, further, an essential part, and is connected with the habit of brightening up empty spaces, in animal designs, with points, commas, crescents and horseshoes.

Rudenko devoted a sketch of his own²⁾ to the style of the Altai people. He described the material, and worked out the Ancient Oriental and Persian connections. He finds that the co-existence of so many features is in no way contradictory, and declares that the Scythian Animal Style never predominated alone. The fact that we viewed it as alone is due to the preservation of neither woven stuffs nor leather in the Pontic area. The art of the Scythians was even richer than we have yet realized. As a social explanation, Rudenko applies the theory of Artamanov, i. e., Animal Style was only an art of a certain class, the art of the nobility, common to peoples of entirely different nations and races, as e. g., the European styles during the Renaissance and Baroque periods, etc.

In the course of my work, much has arisen in my mind which opposes the above.

To begin with, I doubt whether this co-existence of different styles, alongside each other, also applies to the Pontic Scythian art. The number of style-tendencies presented is smaller there, and the spectrum is not as wide as in Altai. The pictures of costumes appearing on Greek vases and other works of art show us this. The designs of these are always quite simple patterns, never so complicated, nor with geometrical tendrils, as in Pazyryk Kurgan II. Central Asia, also, was not so rich in various tendencies in the Karasuk time, and the pottery ornamentation is evidence of this. This abundance must have had a special reason for its existence. I think it is clear, from the material, that the reason lies in the transition situation of Altai, as to both place and time. This led to invasion by new groups, each of which incorporated a different art ethos. We can differentiate these new-comers, with their special taste, in the various kurgans.

A few examples: The Katanda Kurgan, whose dead approach anthropologically very nearly to the people from the Taiga, and to one of whom a «Tungus tail-coat» was given, possessed beautiful full plastics, whose tradition we can follow in the forest territory through thousands of years. Eding did not illustrate the horse-figures of this kurgan next to the finds from Gorbunov Moor (without good reason³⁾)

¹⁾ Rudenko 1948.

²⁾ S. I. and N. M. Rudenko 1949.

³⁾ Eding 1940.

Or another example: The woman in I Akonur Kurgan Nr. 5, who according to the burial customs (which uphold close agreements with the Kenkol' burial-site, with its Mongoloid and deformed skulls) must have come from the Far East. She had spiral designs on her diadem, which can only be explained by the fact that they came from the Late Chou art. One thinks involuntarily of the Aino, who, up to the present time, fasten sun plates on to their headbands.¹⁾

Probably these changes in taste, owing to the appearance of new people, are much more important than the so-called cultural influences, i. e. the trade with Persia, and later with Bactria or China.

When one sees, here in Altai, how a new style tendency belongs to each ethnical factor, one would be inclined to believe as much in Maenchen-Helfen²⁾ who connected the Animal Style with particular wearers, namely with the Europoids, as, on the other hand, in Strzygowski,³⁾ who brought the appearance of abstract art, such as the geometrical tendril, into connection with the Turks. Both claims seem to agree with each other, here in Altai, and to fit in with the material. The stronger Mongoloid elements are, the more the Animal Style retreats into the background. For example, in Shibe which, according to the build of its kurgan and to the anthropological type of the dead prince, belongs strictly to the East, the Animal Style is much destroyed and liquidated.

Maenchen-Helfen's point of view is only to be revised at one point, namely, one must allow for the fact that there are also groups, in which members of Mongoloid races unite themselves with beautiful Animal Style designs, much as in the Noin Ula group. The best proof, however, that Noin Ula is an exception,⁴⁾ is the fact that the whole of the later art of the Turks and Mongols liquidated the Animal Style completely, and built upon those elements, which appear in single monuments of the Pazyryk time, and make themselves known much more emphatically in textiles than in metal.

This does away with the idea, that Altai was a starting point for so many tendencies. On the contrary, we see very clearly that the most varied deviations of style streamed towards it.

Extensive conclusions can be drawn, about the question of the *economy* of the Altai people.

Agriculture is to be expected, in the anterior. Because of the stomach-contents of the horses, found in Pazyryk Kurgan I, one assumed that grain was cultivated, but, owing to the royal rank of the dead, that which was found can only have been a tribute.⁵⁾

How important cattle-breeding was, is seen from the extensive use of leather, wool, and horn, also meat, including horse meat, and cheese. Thanks to the fine quality of the sheepwool, which stands in no relation to the high position of the kurgan and the roughness of the climate, Rudenko had drawn the conclusion that the sheep must have been kept in stalls. But here also the possibility of tribute should be emphasized. Yet above all it seems clearly pointed out that, at this time, High Altai was only the ancestral home of the Altaians, to which they returned only after death. In favour of this, there are the highly-bred and thus sensitive horses, which appeared in all kurgans observed up to date, and were therefore certainly not only imported from the West.

The question as to whether the reindeer was also a domestic animal among the Altai people, has recently been discussed by Vasilevich and Levin.⁶⁾ They contest this idea

¹⁾ Kind information by Dr. Slawik.

²⁾ Maenchen-Helfen 1935.

³⁾ Strzygowski 1917.

⁴⁾ One more exception in later time is the Kudyrga Kurgan.

⁵⁾ A review of Rudenko's book (Tokarev 1950) raised this point recently.

⁶⁾ Vasilevich and Levin 1951, p. 87.

energetically, and do not agree with the point of view (which can be followed up from Marr to Kiselev¹⁾), that the saddles and reindeer mask of the Pazyryk Kurgan I. can only be explained by the existence of reindeer-breeding. The idea of Marr and Kiselev is that these are survivals of an older period, in which the reindeer was ridden. Vasilevich and Levin, however, declare that:

1) The horse was known in Altai much too long (2 000 years before the Pazyryk Period) for a memory of the transition from reindeer-breeding to horse-breeding to be easily combined with the mask.

2) We already know of several other horse-masks. They represent lion-griffins and panthers. Yet no one would wish to claim (as by Marr's method) that these animals were used, before the horse, as transport animals.

3) In art, the reindeer is always treated as a wild animal, and reproduced without saddle, while the horse is frequently represented with saddle.

4) Alongside the numerous rock-carvings from the Early Iron Period, we know of not one representation of a reindeer-rider.

The same sharp refutation of this theory of Marr's, seems to haunt the background of some of the older works by Russian scholars. The fact that this was never stated clearly, can be explained by Marr's position as a dogmatic authority.²⁾

From close observation of the wild animals which we notice in art, it is clear that hunting was practised. Hunting, however, had no decisive economic significance. Thus the Animal Style was, also in those days, no longer a «hunters' art»,³⁾ as it was claimed to be in the «romantic phase» of Eurasiatic research. Fishing would have been at a minimum.

The Altai population must have had a highly developed metallurgy at their disposal. One wonders if they dug for the gold themselves, or obtained it as tribute. The great skill, which they developed in building the deep grave-shafts, with their supporting structures, speaks in favour of the former. The question is, whether metallurgy was such a special handicraft as in the Minusinsk Basin. In any case, domestic craftsmanship must have been very highly developed.

As regards trade, it certainly obtained its most important export goods from gold mining. Kiselev thinks that the richness in gold of the great kurgans depended upon the Greek conquest of Persia. This cut off the natural flow of gold into the Persian Empire. The Altai people were to a certain extent, suffocated in their own gold. Kiselev can find support for his statement in Greek sources. The Bactric Greeks appear to have undertaken a campaign towards the North, in order to achieve a resumption of exports of gold from Altai.⁴⁾ Perhaps a heavy flow of gold to the West and with it, the increase of wealth in gold in the Pontic district, connects up with this cutting off of the South. It appears also to be mentioned that the Altai gold was found alloyed with silver, and is easily recognizable, everywhere, by its light colour.

A proof that trade reached very far to the South, is the appearance of Coriander in Pazyryk Kurgan II.

Presumably the Chinese imported objects are mostly also connected with trade.

Fur goods also come into the question, in view of the domination of the Altai princes over the North.

¹⁾ Kiselev 1951, pp. 374—376.

²⁾ Therefore, these refutations have been overlooked by P. W. Schmidt whose main conception is astonishingly closely related with Marr's theory (cf., at latest, 1951).

³⁾ Cf. Andersson 1932.

⁴⁾ Tarn 1938, pp. 109—112, and Kiselev 1951, pp. 357—359.

I think I cannot be contradicted, if I include here, under the heading of trade, the little which we can assume with regard to the warlike undertakings of the Altai people. We cannot assume that they were involved in great «foreign political» quarrels. They lived more protected than other groups (for instance, the Sakians) and their activities took the form of small pillaging expeditions and attacks. In favour of this idea, the «import goods» are present in some kurgans, but in others, obviously belonging to the same time, they are missing. The weapons also seem, in comparison with other groups, more conservative, not to say old-fashioned.

The custom of scalping fits excellently into the picture of such small-scale warlike activities, inter-tribal and individual quarrels.

When we turn to *sociology*, it strikes us first that women were buried with the men, yet equipped as richly as the men themselves. They have their diadems, which perhaps had a religious significance, perhaps they even had their horses with them. It is striking, how much more numerous the graves with mounted occupants are and how seldom graves with women in them are actually observed. I can naturally not decide, if incorrectness of observation comes into question here. I can only emphasize the fact that, in the Sarmatian territory, the burial of women with horses persists up to a late period, and the researchers of Altai have not devoted much attention to this problem. Therefore, surprises are possible at any time.

The social grading¹⁾ is so important, that I had to anticipate it, in order to make possible an understanding of the distribution of the finds. Over this, I have pointed out the peculiar system of classifying according to rank. The question is, now, who were the people in the great kurgans? Were they kings and princes, or simply chiefs? Were they people belonging to the nobility, yet equals among their equals? On this hangs the problem of what kind of political order predominated in Altai.

The manifold aspect, in spite of mutual «rules of the game», causes us to presume that it was a question of tribes loosely connected, over which none, not even the Huns, obtained an effective hegemony. At first, one considered the Mongoloid from the Shibe Kurgan as a Hun governor, but now, as the Mongoloids appear for the first time in an earlier period, I am inclined to think, here, of refugees from the Huns, emigrants who, inside the graded, yet relatively loose social order, could easily rise to a higher position. In any case, the burial of the princes in the Shibe Kurgan was fitted in to the local burial customs.

Griaznov's presumption that a *modus vivendi* and, thus, better living conditions for both, was formed between the anterior and High Altai, has already been mentioned.

Russian authors have often discussed the question of individual or common, respectively clan property among the Altai people, but I see no remarkable difference from the forms known of the later Nomads of Central Asia.

As regards *customs, habits and religion*, we have already spoken of tattooing, scalping, and the use of amulets.

There remain a few unique complexes for consideration. One can conclude, from the very intensive and somehow fascinating use of animals in art, that this often oppressive world of fighting animals must have had some religious significance. The Russian specialists have an easier time, in this respect. They speak of totemism and totemistic survivals. With this, the problem is settled for them. According to Central European terminology, there is not much trace of clan-totemism,²⁾ but an individual connection

¹⁾ One could ask where this strongly marked social differentiation comes from, but the answer cannot be found in the Altai material alone. Altai only followed examples which existed long ago in neighbouring districts.

²⁾ But it cannot be excluded, if we regard the manifold related features between Ugrians and Yakuts.

with certain animals seems present. I should like to point out, as an example, the fact that the gold plaques of the Hermitage show snakes and boars, to put it shortly, animals which we know, mostly quite singly, from the monuments already reported. Thus, certain animals obviously belong to certain monuments. In Pazyryk Kurgan II., for example, the connection between man and lion-griffin or stag, and on the other hand, woman and lotus, predominates. Such designs as the constantly re-appearing griffin with a stag's head in its mouth must have had a religious significance. I have already discussed the diadems and their animal ornamentation in general. War-booty certainly caused a muddle in respect of the harness, but something of a leading motif can still be seen on some harnesses.

It cannot be a coincidence, that the heroes of the Ugrians (in whose case much has remained preserved, of a kind which, on the Steppes, was destroyed) often had protective animals around them, which decided their victory.

I have already mentioned the actual «inhalation apparatus», which was used to produce narcotic vapours. We have here a proof of the close agreement with the Scythian West via another source, namely Herodotus, who did not understand the use of hashish, but described it.¹⁾

The question is, now, how far those other stone altars, namely simple stone slabs and stone tables on four feet, served the same purpose. This is possible, but it is more probable, that they were used for purifying, that is, they completed that peculiar purification by fire, which continued into the Mongol Period. These altars are a sign that we can presume religious ideas which are closely related to those of the Iranian fire-religion.

In the case of such equipments connected with a cult, their appearance in very similar forms in the Sarmatian territory, actually in a definite cultural group, is significant. We do not know if a Sakian centre formed a starting point for both territories. In any case, a Central Asiatic centre is possible, and this idea need not be excluded, even if one believes in a connection with the burner-dishes of the early IInd millennium B. C., as we have seen how such vessels reach towards the East. Anyhow, the religious ecstasies which are today limited to the Shamans, were once common property.

It is obvious that there is much to be said about the death-ritual. To begin with, one can differentiate between two forms of mummification, an ordinary one, in which the intestines were removed, and a «doll-technique», in which the dead, as in the Tashtyk Culture, were converted into dolls or bolsters. We do not know to which cultural connection these customs belong. We can only imagine that, then, a religious wave swept over Siberia, which encouraged the preservation of the human form, for survival after death. The famous portrait-busts of the same Tashtyk Culture form a classical expression of this tendency. Not only the skin but also the bones were carefully preserved. As we find the skeleton as bearer of the surviving soul among the beliefs of the Eastern Taiga in Siberia, it is possible that the idea comes in from this side, with one of the forest components.

What happened to the fleshy parts, we do not know, except that they may have been divided during the funeral feast, among the relatives, who thus united themselves for the last time, and for ever, with the dead. This presumption, which Professor Bleichsteiner, starting from Tibetan customs, pointed out to me, has now been made by Rudenko. He put forward the report of Herodotus, about the Massagetae, who added corpses of their fathers to the funeral bakemeats at the death-feast.

The coffin, which consisted of a tree trunk, is only the innermost part of the coverings (wood and stone) in which the dead were encased. One thinks involuntarily of Sarmatian

¹⁾ Herodotus, vol. IV, chapt. 75.

rituals, which not only preserved the dead man himself, but also wanted to keep the sacred earth from contact with the unclean corpse. This explains the scattering of bark, which is much reported, from the more simple graves. Traces of a fire in the burial trench (like in the Vavilonka Kurgan) appear very frequently in burials in the Sarmatian territory.

The replacing of the sarcophagus by a simple couch, doubtless denotes a later development.

In simpler graves, the coffin is missing, and we only find the stone chest (already known from the earlier period) in the anterior, and the wooden chest in the whole Altai territory.

The chambers of the great kurgans came into being through the further development of these massive troughs. They were doubled and supplemented with stone packing.

In the case of the co-burial of horses, we see, quite consecutively, the beginning with one horse, then the doubling of this, and then a third horse is added. Thus, the level of nobility is attained. Only with princes does the number rise to seven, ten, or even sixteen. The notches in the ears which differ from horse to horse, point to a tribute, or to last gifts from faithful squires and attendants. Remains of vehicles in the rubble of the kurgans, point to the probability of a funeral procession, such as Herodotus described in the case of the Royal Scythians. How many horses were allowed to the dead man, in the procession, evidently depended upon the importance of his position. Doubtless a claim to power is hidden in these »gifts«. Numerical effect gained ground gradually more and more at the cost of quality. Among sixteen horses, eight were inferior and undecorated.

Out of the whole of the clearly defined rites, the fact stands out, that we observed the cutting up of the horse, and this can be perhaps connected with Sarmatian customs. On the other hand, the lack of horses, in only one of the greatest Kurgans supplies another pointer towards the East, where in Noin Ula, the same thing can be observed.

The Russian scientists use this connection as a means of dating. They follow the idea of dependence of the Altai Kurgans on Hun examples, e. g. Noin Ula.

I should like to point out, that the dependence of the Noin Ula group on Chinese examples is claimed by Spiegel¹⁾, and at certain points, convincingly stated. Therefore I call attention to the fact, that Noin Ula and the Pazyryk monuments do not connect up immediately with each other, but both can be traced back to a Chinese centre, or, better, to one in a territory bordering on China.

In connection with the kurgan mounds I should like to mention again that the developments run clearly, from the use of earth, to the use of stone. If at a later period we again come across earth kurgans, they fall, otherwise, out of the general picture. The I Akonur Kurgan Nr. 5 is so strongly differentiated, that it must have been a »foreigner« who lay in it.

Who, then, were the bearers of the Pazyryk Culture?

The *anthropological material* of this period has been worked at by Debets, and also, partly, by Komarova.²⁾

In the Altai anterior it turned out³⁾ that the skulls, which belonged to the Biisk culture (according to Griaznov) show strong resemblance to the Afanasievo type (Pl. XIV: 2, 3). This signifies a close agreement with the predominating type of the Minusinsk territory. The noses have become less pronounced, so that a Mongoloid mixture cannot be entirely

¹⁾ Spiegel 1933, p. 69.

²⁾ Debets 1948, pp. 136—145. In this work the measurements of the individual skulls are published for the first time (See supplement 4, p. 337). Debets brings excavations into this, which were not even mentioned in the extensive works of Griaznov and Kiselev, e. g. those of Kopitov in 1917.

³⁾ Debets 1948, p. 138, Pl. 46.

excluded. Debets, however, seems to think that it was more a question of an inner development (?).

The skull material of the Berezovsk Culture shows that this type continued to exist. Yet it retreated behind a new group, which Debets split into two components. He continually observed the union of a Mongoloid face with dolichocephaly, and on the other hand, the union of an Europoid face with brachycephaly. This signifies, in a practical sense, the appearance of two new types at once, one long-skulled Mongoloid, and one short-skulled Europoid.

In High Altai, Debets confirms the presence of Europoids during the whole Pazyryk time. These belong especially to the brachycephalic type (Pl. XIII: 1). Among these, short-skulled Mongoloids turn up, even in the older phase. Kurgan Nr. 6 in Tuiakhta offers the best example, and this is again a question of a short skull (Pl. XIV: 1). In the later phase, we come across Mongoloid long skulls, sometimes classic and extreme specimens, like the old man from the Shibe Kurgan (Pl. XIII: 3). In any lesson book he could form an illustration, as an example of the Tungoid group of the Mongoloid division of race, namely that form which is characteristic of wide territories of the Eastern Taiga. The skull from the Katanda Kurgan was also a Mongoloid one, although with an unusually high cranium. Yet, among these Mongoloids, in the same kurgans, the native Europoids continue to exist. (They are mostly represented by women.)

As a summary it can be said that the original type in the whole of Altai, also in the Minusinsk territory, was the Afanasievo long-skulled type. The rounding of the skull may be traceable partly to inner development, and partly to an influx from the South and West, where centres of brachycephalization (in the Sakian and Sarmatian territories) existed. The first Mongoloid invaders could have come from the immediate neighbouring territory, where the Stone Tombs show a similar skull-type, as appears in the Tuiakhta Kurgan.

The Mongoloid long skulls belong only to a later movement. It strikes one immediately, that they also belong to a later wave in Transbaikalia and Northern Mongolia. They seem to have been the first to succeed in penetrating into the interior.¹⁾

Let us now try to outline the position of Altai as regards the culture provinces surrounding it, with the picture of the culture and the anthropological material as foundation.

There is a very clear echo of *Persian* influences. Rudenko thinks, that the prince in the Pazyryk Kurgan II. had served in the Persian army, and was familiar with the ceremonial of the Persian court.²⁾ The connection can hardly be united with the late period of the Pazyryk Kurgans, but may concern the period which is represented by the Tuiakhta group. In any case, the Persian Empire and its culture were for a long time an exemplary pattern followed by the whole of Central Asia, including Altai.

In the age of *Greek* domination there was evidently no such intensive flow of culture to the North and North-East, and we could only see traces of the Graeco-Bactrian influence in a few monuments. Tolstov has constructed an interesting explanation for this lack,

¹⁾ If their appearance is not be explained otherwise, namely with a migration from the North.

²⁾ The Persians called such northern mercenaries «Scythians». Rudenko, who calls the Altai people «Scythians», relies not only upon the idea of the «Scythian Stage», as he cautiously explains, but also on this application of the word. He probably even believes in a mutual ethnic connection between Pontic and Altaian Scythians but does not wish to re-construct any migration, mention of which was prohibited by Marr. The use of the term «Scythian» by the Persians probably explains why Hippocrates was able to describe the Scythians as «Mongoloids». In Pontic material all foundation for this is lacking. He may have had such Asiatic Scythians in mind among whom, as we see in Tuiakhta, Mongoloids appeared very early.

and suggests that the Graeco-Bactrian Empire formed an alliance with the Huns, as protection against their neighbours in the North-East, belonging to a Sakian-Massagetic confederation. This could be the reason why the Noin Ula group was so ready to accept Greek influence. This argument is pure fantasy, only supported by the fact that the dates of the Hun attacks fall in fairly accurately with the activities of the Graeco-Bactrian Empire (as Tolstov says, their attacks on the Sakians were arranged between them beforehand), but the situation fits in. The fronts are clear, and explain why the Greek influence is not more discernible.

Altai is strongly and continuously bound up with the *Sarmatians*. This connection, as regards time, belongs to the early and intermediate stage of the Sarmatian Culture.¹⁾ The Russian authors have mostly contented themselves with a statement of dates. The fact that Kiselev repeats Tolstov's fantastic theories shows clearly that we know the political changes only very superficially.

It is actually impossible to be completely clear in these matters, because Middle and East Kazakhstan are, at this time, only known by means of scanty finds. We know of the so-called Mysovsk Culture by means of Dmitriev's excavations²⁾ and of some older, unsystematic ones, among them those carried out by Heikel.³⁾ Yet ethnical movements also, can be approximated by means of the anthropological finds. These movements could have their basis in the especially strong inner tension between the different tribes of the Sarmatian territory, where so many groups fighting against each other, exist side by side.

To a certain extent these parallels can be explained, in a roundabout way, namely by influences, which flowed from the *Sakian* territory as well as to Altai and Sarmatia. Although we can say so little that is definite, yet it is clear that the Altai people, and the Sarmatian and Sakian peoples represent a unit with a common destiny, probably a family of peoples, in which the Altai people were the most conservative because they lived in a less accessible territory of retreat. Maenchen-Helfen⁴⁾ has presumed a connection of all these peoples with a great linguistic unit, that is the Iranian linguistic group, a theory the greatest supporter of which, in the past, was Barthold.⁵⁾ Naturally, we could not prove this from our material, but I should like to bring forward the fact that I have found nothing which contradicts the assumption of the existence of such a unit.

It is now of extreme importance, in order to understand the linguistic distribution that the *Minusinsk Basin* shows signs of having held a special position in regard to the territories mentioned up till now. Here, in spite of anthropological changes, the tradition of the Karasuk Culture (in the closest sense) has never been wiped out. The giant kurgans of the Tagar Period, with their clan and collective burials point to a history of this territory which progressed according to its own laws. The fact that groups whose linguistic attachments point towards the South-East (Keto) occur, later, in the Yenisei basin, can perhaps be connected with the archaeological history of the Minusinsk territory, which is separated from the West. Where, in Altai, we come across an inventory which is like that of the Minusinsk area, concentration on one clearly defined group is noticeable (Aragol). In the Tashtyk Culture of the Minusinsk district there are astounding parallels with Altai, but here it is probably only a question of influence from outside, which affects both territories equally. In any case, they run parallel, rather than influencing each other as regards direction.

¹⁾ According to the classification constructed by Smirnov 1950.

²⁾ Dmitriev 1925, pp. 187—190.

³⁾ Heikel 1918.

⁴⁾ Maenchen-Helfen 1935.

⁵⁾ Barthold 1922.

The *eastern contacts* were, up to date, reduced to a common form: results of Hun expansion were seen in them.¹⁾ I should like to emphasize, here, on the contrary, the manifold nature and longlasting continuation of these relationships. In our Altai data we can confirm:

1. Short skulled Mongoloid types, which bring no cultural changes with them. They probably originate from a neighbouring group. (Tuiakhta).
2. Long skulls, very similar to the material from Noin Ula. In their »gifts«, contrary to Noin Ula, no special tendency towards Animal Style is noticeable. Their burial customs also incline far more towards the Tashtyk Culture than towards Noin Ula. Taken together, this signifies that it is not a question of exactly the same tribe as that in the Noin Ula group. (Shibe).
3. Mongoloid long skulls seem to be further connected with cultural elements which belong to the Taiga, as for example the »Tungus tail-coat« and plastic carvings. This group is nearer to the Animal Style of the Noin Ula people. (Katanda).
4. We come across Mongoloid long skulls in the Altai anterior, without any subsequent cultural breach. (Berezovsk Culture).
5. The Mongoloid group, with skull deformation, to be found in the Kenkol' burial-site, must have made itself felt in Altai, as, in one case, we find a Catacomb Grave with a completely deviating motif (spiral) in its ornaments. ((IAkonur Kurgan Nr. 5).

One can, therefore, see clearly that one set of Mongoloid types were under strong Chinese influences, and the other set almost free from them. Also, many preferred the Animal Style, but most were furnished with gifts, in which the Animal Style has already completely disappeared. It can be presumed further, that other groups which we have not yet been able to determine also influenced the Altai-groups. ^{that}

We can look for the explanation of this many-sided aspect in the fact, the Huns represented a power complex, in which various stocks and cultures existed side by side. It would be very easy to unite such an explanation with historical sources. The explanation does not, however, hold good as regards everything which has appeared, not even for a majority. For example, the man from the Tuiakhta Kurgan Nr. 6 migrated to the West at too early a period, and at a time when the Huns were under the domination of other peoples. The Kenkol' group, too, showed itself unsuitable for a similar attribution.²⁾

A glance at the Volga Steppes shows us that our suspicion was correct. Here, also, we find the first newcomers from the Far East, already at a time when the Hun confederation had not yet been consolidated. In East Kazakhstan, into Karaganda, too, appeared a group of Stone Tombs, at latest in the 5th century B. C. I think, therefore, that we must keep to another wider formula than the Hunnic one, and say:

The transposition of the chief weight of the Hun power to the West, and the Hun domination over wide parts of the Western Steppes represent only the expression and the results of long-lasting migrations to the West which began a long time before. The movement included and swept with it various tribes of Mongolia, Northern China, Manchuria, and of the Northern Taiga. Many came from the immediate Chinese zone of influence, many out of the territory influenced by Sakian groups, with their Animal Style, many bear the stamp of a peculiar individuality. This movement went ahead in various forms. At one time it was single individuals who migrated, at another, whole tribes with their flocks and herds. The reasons for this must have been very varied. The effort to avoid

¹⁾ Kiselev considers that it was the Hun example rather than the Huns themselves that influenced the Altai people. I will not exclude this possibility, but I think that the imitation of Hun customs is not enough to explain the Mongoloid skulls in Altai.

²⁾ According to Kiselev (1951, p. 391), the Pazyryk Kurgan I. belongs to a time when the Huns were ruled by the Yüeh-chih.

Chinese pressure, the disinclination to be included in the Hun sphere of power, the possibility afforded, by the migration of Iranian groups to the South, all these played their part, as did marriage relationships, and kidnapping into slavery, and, only finally, the Hun expansion itself.

Just as this movement did not begin with the Hun Empire, it also did not end with it. The events of the Avarian Period show an immediate continuation.¹⁾

✓ If we take such a continuous and long-lasting flow into our calculations, the conservative attitude of the Altai again requires explanation. Here we could confirm a native tradition, which includes a strong part of the anthropological material as much as the death-ritual, and the ornamentation in the same way as the weapons, and which is especially to be noticed, in religious connections. In any case, a fundamental difference from the Sarmatian territory exists, as this was, at the same time, by eastern influences split up into an abundance of varied burial customs.

I think now, that the explanation of this conservative attitude in Altai depends upon which way was taken by the main flow from East to West. This stream runs actually from Manchuria, along the northern border of the Gobi, over Dzungaria into the Balkash territory, and from here on, avoiding the Aral Lake and its powerful cities, into the Steppes north of the Caspian, i. e. it surrounds Altai and the Minusinsk territory in the South. Only the branches of these great waves reach Altai, and, later, the Minusinsk Basin. Thus the forms of entry into Altai are so manifold and subterraneous. It is questionable, whether Altai was really closely dependent on the Huns. The interpretation which Tokarev²⁾ gave, regarding the differences in the harness of the horses, in the Pazyryk Kurgan I. gives a striking picture of such social forms. He considers that, in this kurgan, we come across a prince for whom his ten vassals, perhaps representatives of dependent groups, each laid a horse in the grave as last tribute. The masks express specialities which exist in the ritual of these tribes and their leaders. One vassal felt himself connected with the reindeer, because he himself came from the forest, another preferred the griffin idea. Perhaps he had previously fought among the Parthians, among whom the lion-griffin played a decisive part in the death-ritual. Tokarev may be right or not, in any case, just as in the early Middle Ages, the heroes of varied origin performed their deeds of heroism, at one time in one royal camp, at another time in another, thus it probably happened here. We should not forget that the Sagas of the Ugrians, as old neighbours of the Steppe, tell us clearly of the journeys and adventures of the «pigtailed heroes».

It would now be very tempting to believe, that in the next centuries, the mingle process proceeded further along the same lines, and ended with the complete domination by the Eastern elements and their languages. The fact that Altai was finally Turkish seems to point out that the first invaders were essentially of Turkish origin. This is mostly stated by Russian scientists. They regard the Altai-Turks as the inheritors of the many thousand year old past which we have represented.

However, it is surprising, by how little archaeological material this theory is supported.³⁾ For the 2nd—5th centuries A. D. all finds are lacking (excepting perhaps a few badly described and long ago lost objects from Radloff's excavations). Only one

¹⁾ The early beginning of this migration can only be observed from now on, when we wish to explain appearances, such as that of Turkish names in the Volga region, already at the time of the birth of Christ, and also the strong differentiations between the Chuvash and the other Turkish languages.

²⁾ Other, perhaps better, explanations of the masks exist nowadays, but the difference between the horses is best explained by Tokarev.

³⁾ Kiselev 1949.

kurgan group of the later time, Kudyrge, shows distinct signs of connections with an older period. Only Kudyrge contains saddle-bows, decorated with Animal Style, and needle-like belt pendants, as we have already mentioned.

This extraordinarily negative situation, as regards finds, could be traced to three reasons:

1. Perhaps we cannot yet recognize the monuments of the 3rd—5th centuries A. D. Maybe our methods of division are not correct, or the burial-customs had changed in such a way, that no identifiable remains were preserved, as, for example, in burials above ground.¹⁾

2. The Altai population could have been decimated by a great military disaster (or by some infectious epidemic).

3. A migration of the population could have taken place. All these possibilities need not exclude each other.

After this problem had been passed by for years, and even remained unrecognized, Griaznov's excavations, published in 1950, brought completely new and surprising hints at a possible solution. They showed clearly a breach in the Altai anterior. After the Berezovsk Culture had ceased, a new people immigrated. Their metal inventory and pottery approach very nearly to the Pianobor Culture. Here it is, therefore, a question of some kind of Finno-Ugrians, perhaps relatives of the Magyars.

These finds made by Griaznov favour the fact that our methods of chronological classification are correct, and that the lack of finds in Altai also, is not accidental, but was caused by the decimating of the population, in any case, by some thorough change. In the Late Pazyryk Period itself, such a close symbiosis between High Altai and the anterior existed, that it is not very probable that a foreign group could have settled down, in the Altai anterior and preserved its cultural independence, while the builders of the great kurgans were still lords of the Altai.

In other words, the change of population in the anterior speaks entirely in favour of an evacuation of Altai which naturally cannot have been general and complete. It is very possible that the pillaging of the great kurgans, which took place very systematically, began only after the necropolis were deserted by their builders. The grave pillagings were carried out quite openly, although they took place relatively soon after the burials. If relatives of the dead had ever visited the place, we should have seen traces of attempts to repair the damage (as is, for instance, easily recognizable in the royal Egyptian graves).

How did the disappearance of, at least, a large part of the Altai population come about? Possibly through a great military catastrophe. Possibly (perhaps in connection with such an event) through the migration of whole tribes towards the West and the South, where, exactly in the first centuries A. D. the arrival of flocks of new peoples, from Central Asia, is reported. Perhaps a situation came about in Altai, similar to that in East Europe, when the migration of Germanic peoples in the 5th and 6th centuries A. D. left wide territories deserted.

The above facts point to the presumption that Turks (and, to an extent Samoyeds), the later inhabitants of Altai and its borderlands, are not, or are only distantly, the descendants of the old Europoid people, and also are not the descendants of the first wave from the East which mixed with the Europoids, but are newcomers, who, later, penetrated into territories which stood empty, or were only scantily inhabited.

The fact that I dare utter such a presumption, is supported by the following circumstances:

¹⁾ In favour of this point of view, is the fact that finds from this period are, in general, rare also in the Minusinsk territory. Yet systematic excavations have proved the existence of «transition forms». The situation in the Minusinsk Basin is quite different from that in Altai.

1. Groenbech¹⁾ has pointed out, how many extraordinarily peculiar grammatical features the Turkish of the Orkhon writings (that is, the language of people, who came from Altai in the 6th and 7th centuries A. D.) contains. These features are best explained by the fact that, here, it was a question of a group, which had not long ago left the hunter stage behind. Such people could not possibly be descendants of those tribes who bore the amazingly complicated and mixed culture of the Altai kurgans. It must have been a question of new peoples, who came from the Taiga or its borderlands. Otherwise, the Non-Turkish elements in the Orkhon inscriptions must have been more important.

2. Kiselev, in his great summary, relating to the connection between the Pre-Turkish and the Turkish Altai has, at least become uncertain.²⁾ Only between the cultural picture of the Shibe Kurgan, and the burial-site of Kudyrge does he find sufficient parallels. Yet the Shibe Kurgan belongs to exactly those monuments, which have least to do with the local history of Altai. In it probably lies a man from the Taiga. The parallel could originate entirely from a mutual foreign starting point.

3. The tribal sagas of the royal clan of the Turks, which are brought over by means of Chinese sources, as well as by Western, contain a number of statements which signify a late settlement in Altai, perhaps by people fleeing, after the collapse of the Hun Empire in East Asia. It is even once stated definitely that the Turks were «Northern neighbours of the Huns».³⁾ It is hardly possible that this should relate to their settlement in Altai.

However this may be, all later finds show complete victory and the crystallization of one, that is, of the Eastern principle, instead of the former existence of different principles alongside, or among each other, which we got to know in the Pazyryk Kurgans. A uniform covering stretches over Central Asia. «There is one God in Heaven, one Khan on earth» was, later on, the famous formula, and a political expression of this is the Turkish Khaganate, which, starting from the Altai Turks, included all Central Asia in one unit.

As is usual in history, this unit signified, here also, no cultural profit.

Only in certain territories, e. g. in the Minusinsk Basin, did the old complicated world continue to exist, and it formed the basis for an amazing blossoming of handicrafts and trade.

With this, however, we reach the limit of the statements which we have devoted to rich and ancient Central Asia.

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¹⁾ Groenbech 1936. This point of view about the Turkish element can be completely united with what Ramstedt and most Russian authors, state, e. g. Vasilevich (1946, 1949a, 1949b).

²⁾ Kiselev 1951, p. 494.

³⁾ Bichurin 1950, pp. 220—233.

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Pl. XXXI. MIRROR FROM PAZYRYK KURGAN II.

Silver mirror in two parts with horn handle. (Through-measurement 15 cm.) After Rudenko 1948.

Pl. XXXII. HEADRESSES FROM NOVOCHERKASK AND PAZYRYK KURGAN II.

- Fig. 1. Golden diadem of the Novocherkask Treasure. After Tolstoi and Kondakov 1889.
Fig. 2. Diadem of leather and fur from Pazyryk Kurgan II. After Rudenko 1948.

Pl. XXXIII. WOOD PLASTIC FROM PAZYRYK KURGAN II.

Representation of a stag with antlers of leather. (Belonging to a diadem?). After Rudenko 1949b.

Pl. XXXIV. WOOD PLASTIC FROM PAZYRYK KURGAN II.

Object of unknown significance (Pole-top?) After Rudenko 1948.

Pl. XXXV. HEADS FROM PAZYRYK KURGAN II.

Fig. 1. Head of the slain prince.

Fig. 2. Head of the princess.

Fig. 3. The false beard. After Rudenko 1948.

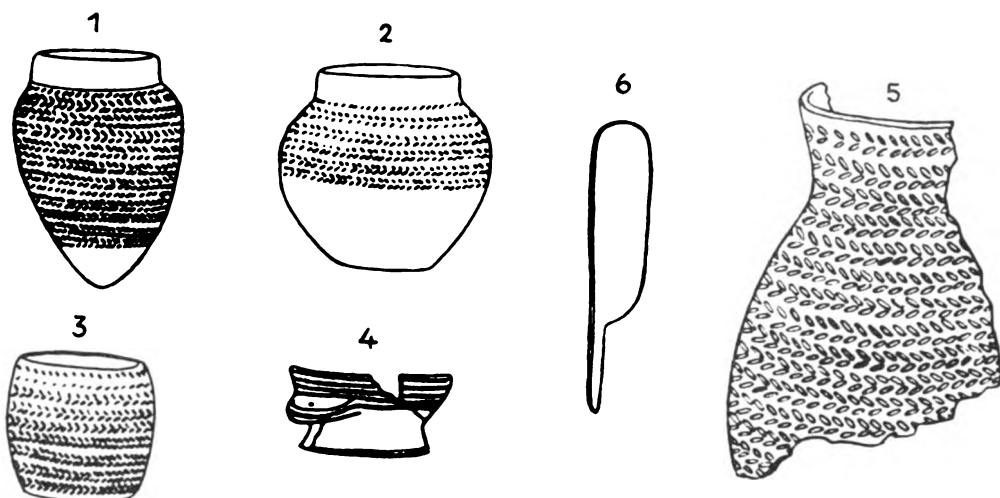
Pl. XXXVI. FINDS FROM PAZYRYK KURGANS III AND IV.

Fig. 1. Ornamental horn plaque of the saddle-bow. Kurgan III.

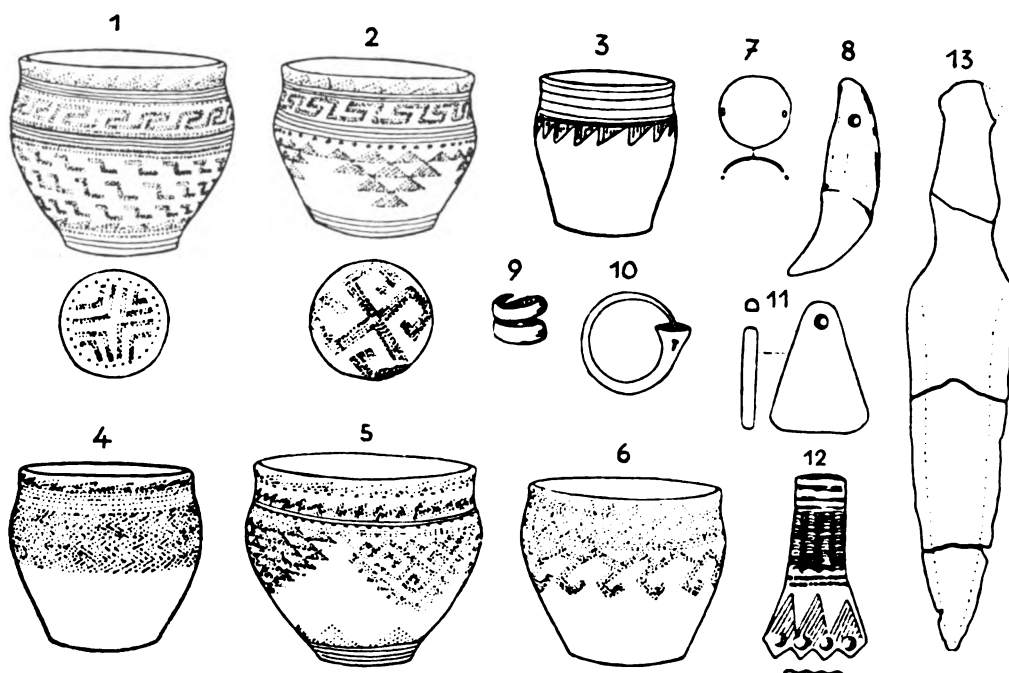
Figs. 2, 4 and 5. Ornamental plaques belonging to the harness. Kurgan III.

Fig. 3. Ornamental plaque. Kurgan IV. After Rudenko 1950a.

A.



B.

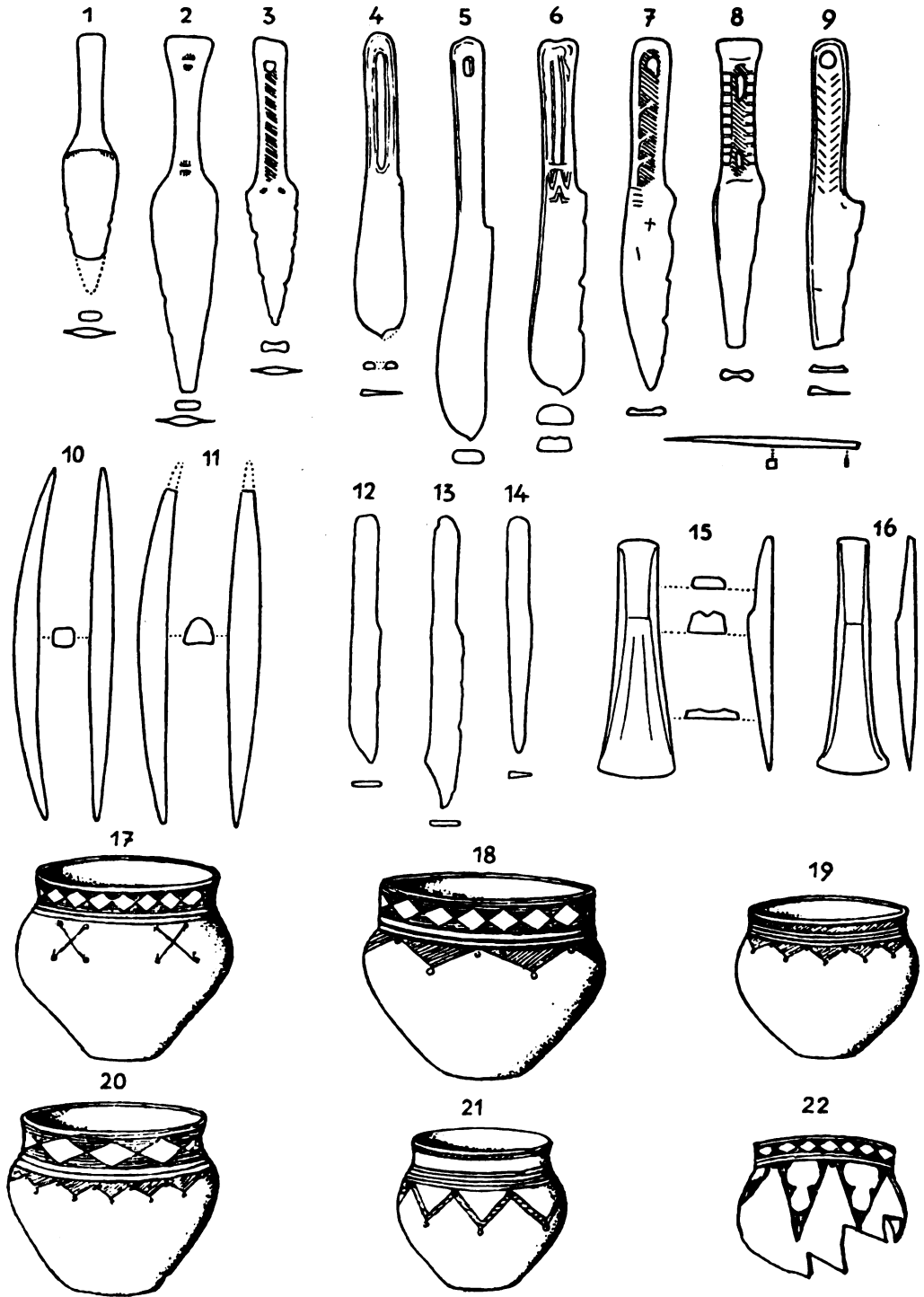


B. Malyi Koitus.

12, 7, 9, 10, gold; 8, tooth; 11, stone.

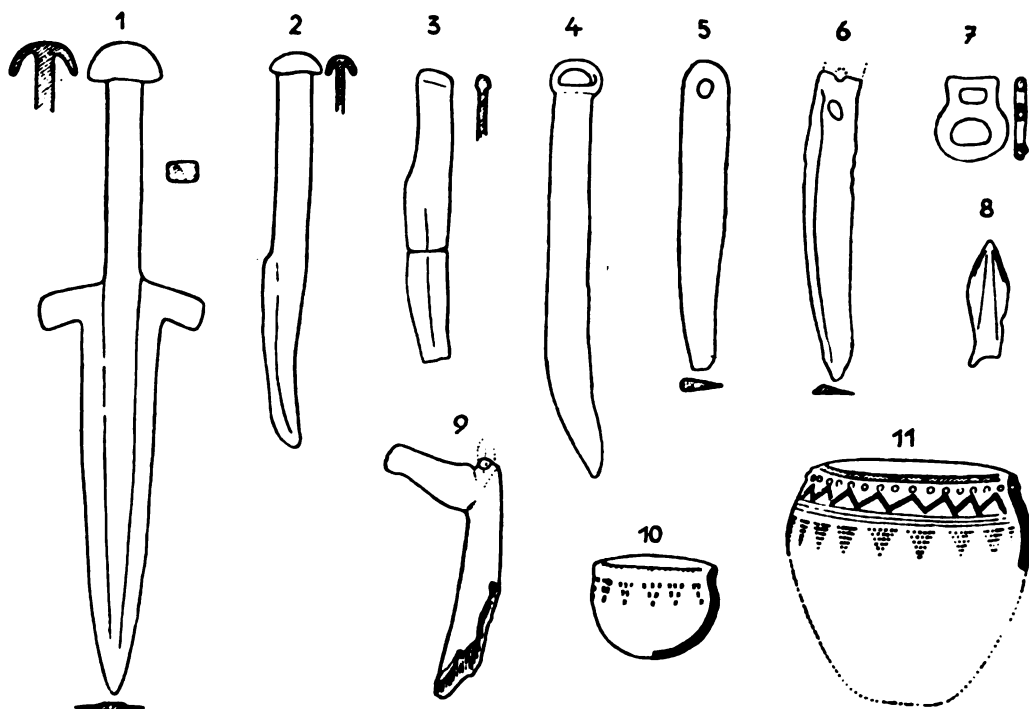
Semipalatinsk (Karasul phase).

Pl. II.



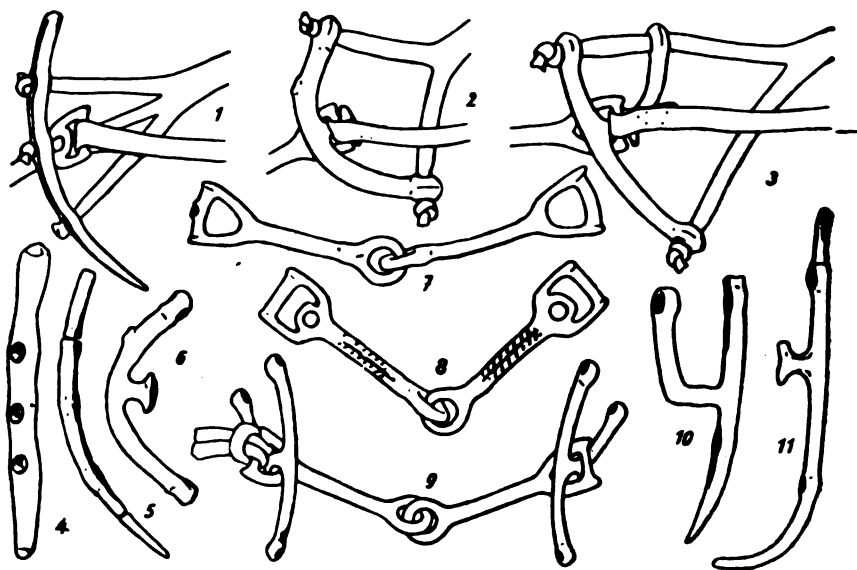
Pottery (17-22) : Surtalstine (Altai).

A.

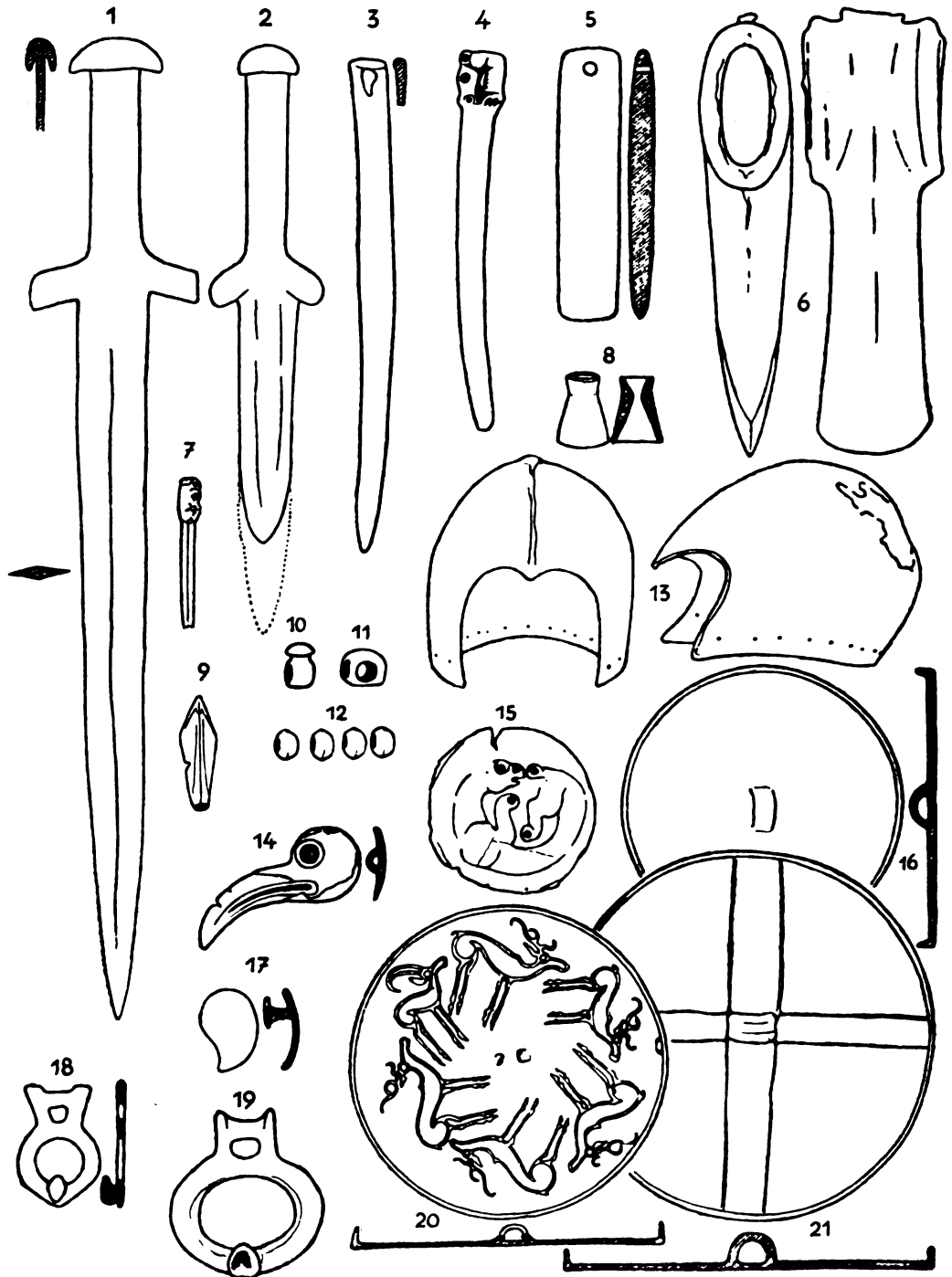


B.

v. p. 152 .

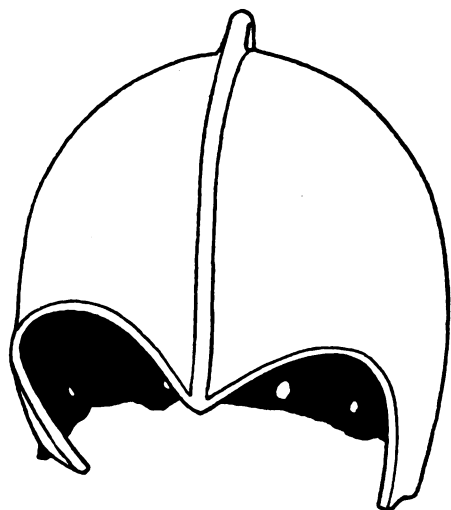


Pl. IV.

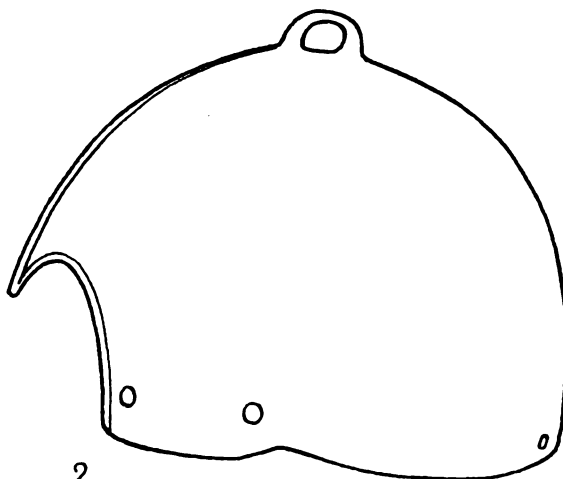


1, 2, 6, 9, 10, 20, 21 : stray finds.

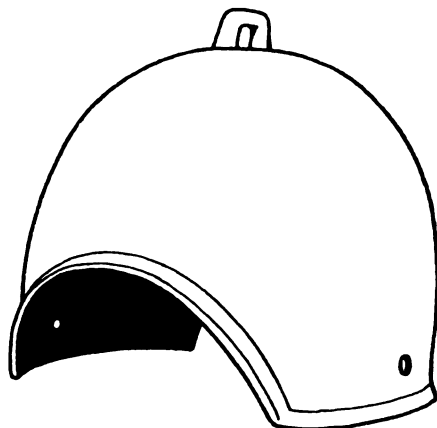
1



1α



2

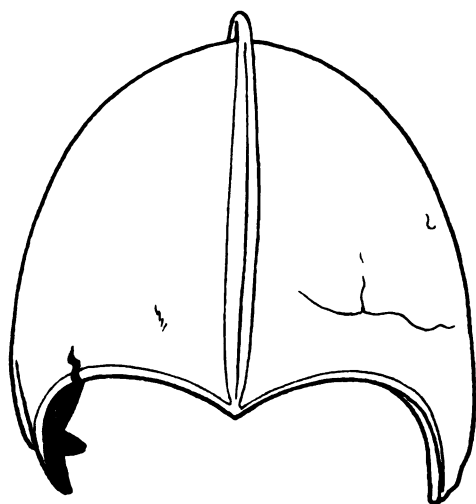


1. Kelermes.

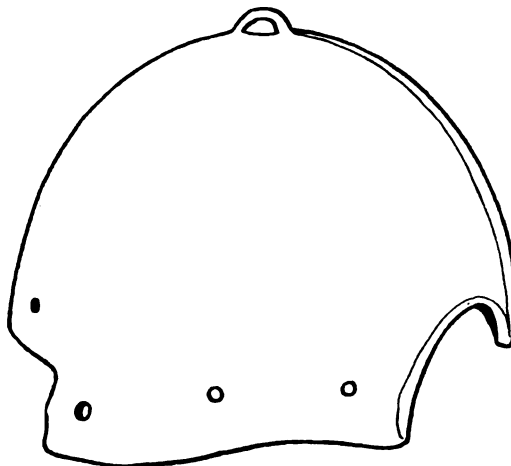
2. "Ordos"

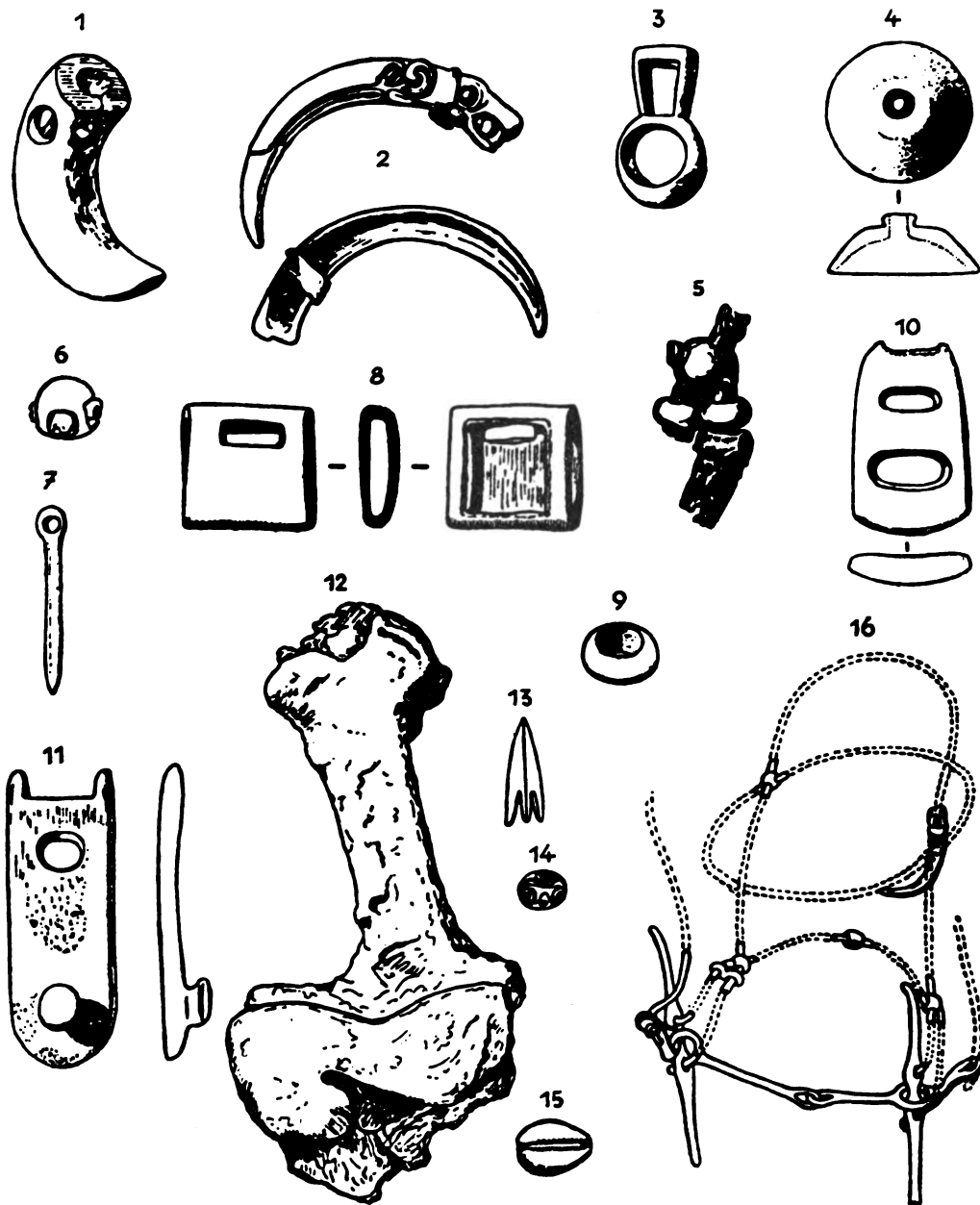
3. Staryi Pecheur.

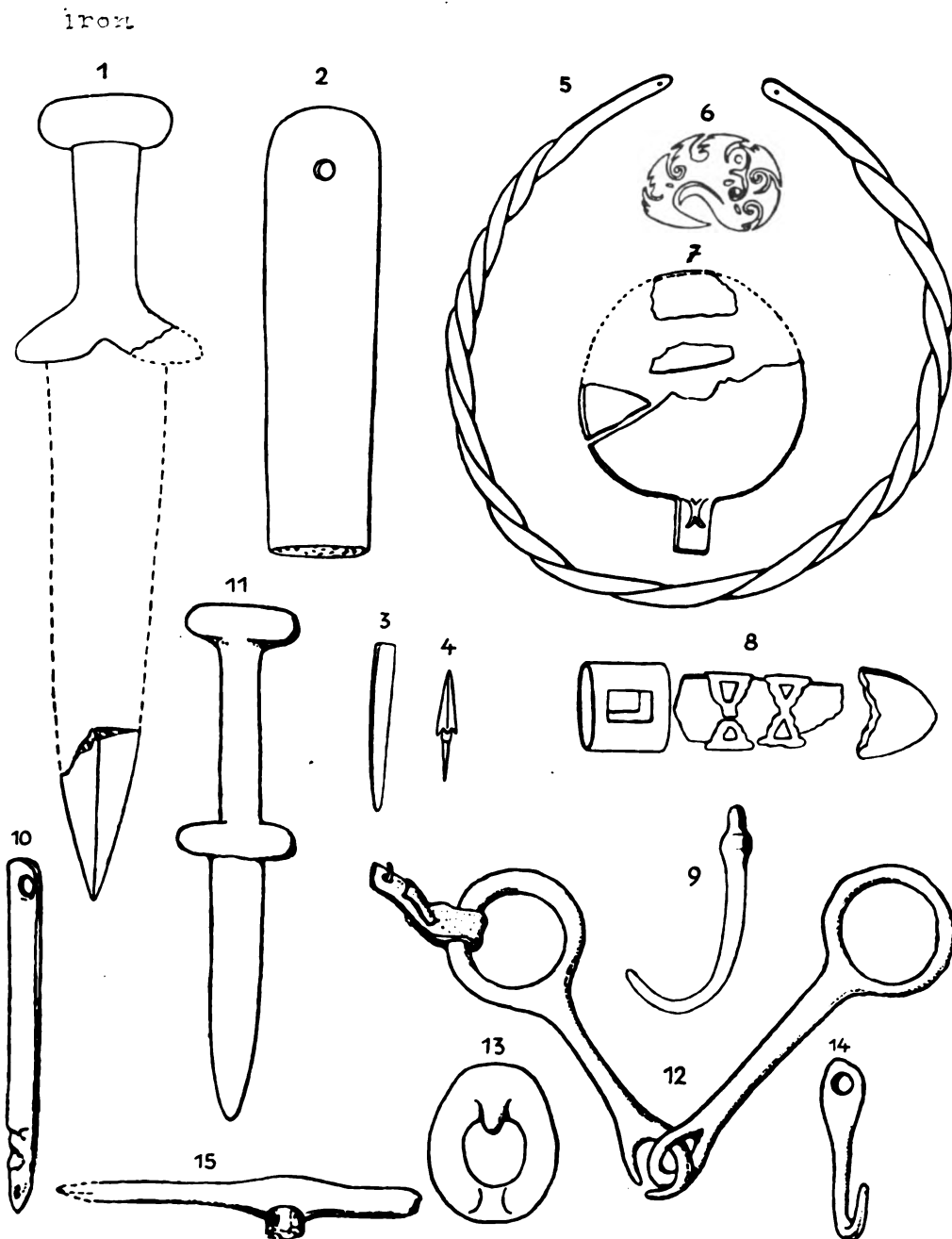
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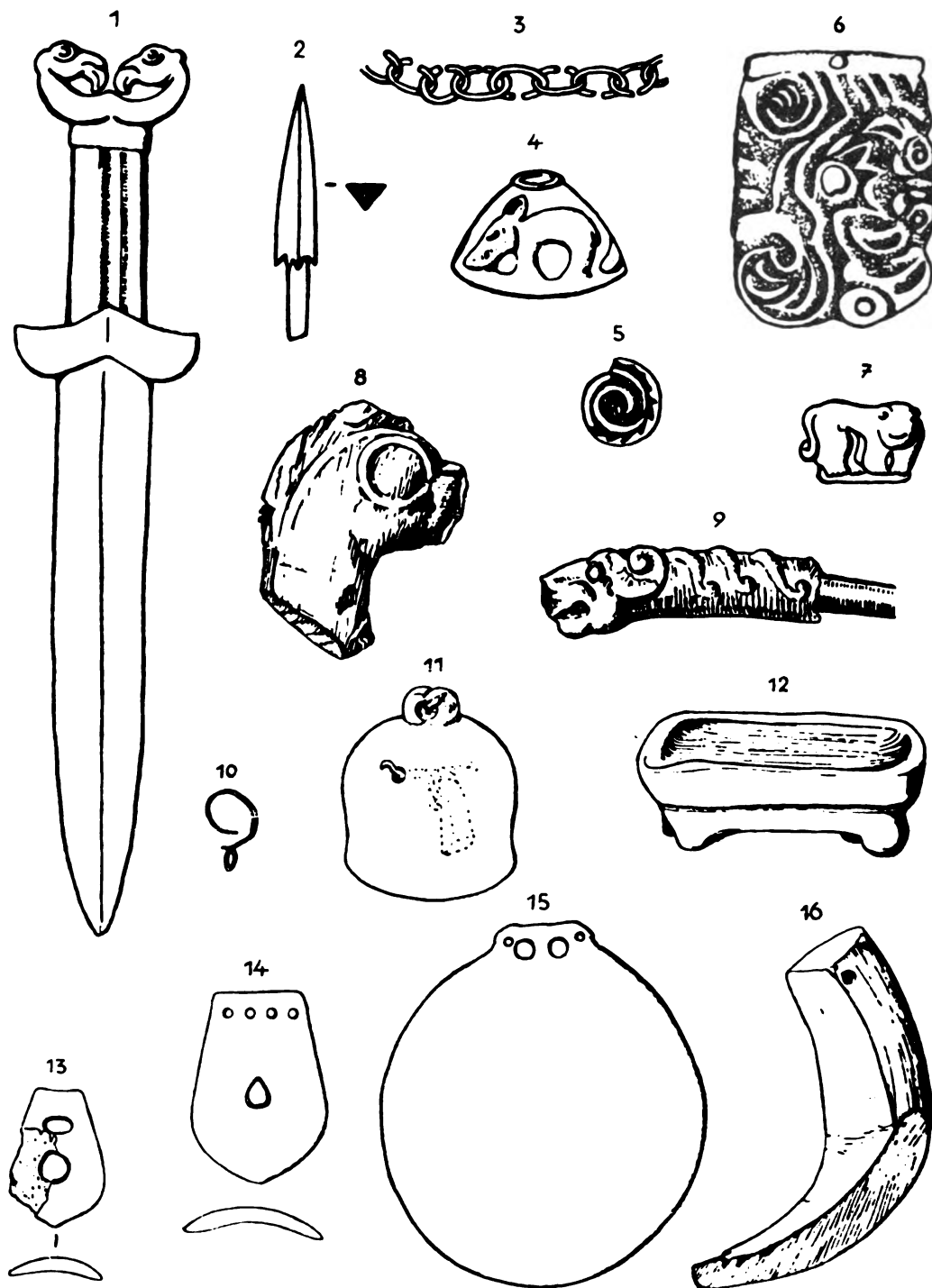
3α



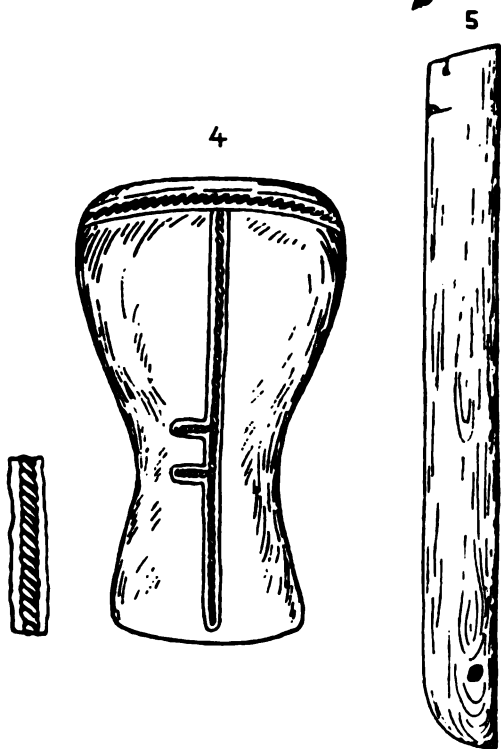
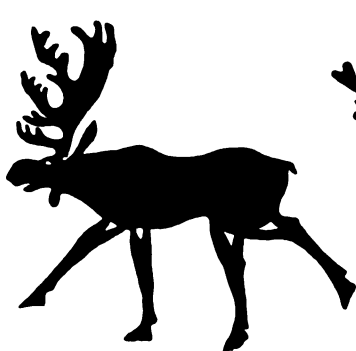




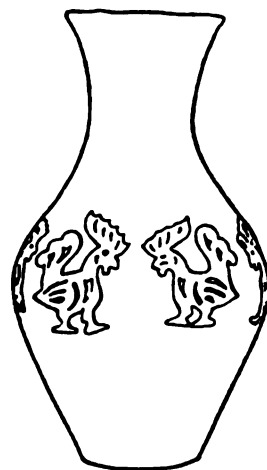
The mirror, No. 7, 5th-4th c. B.C. type.

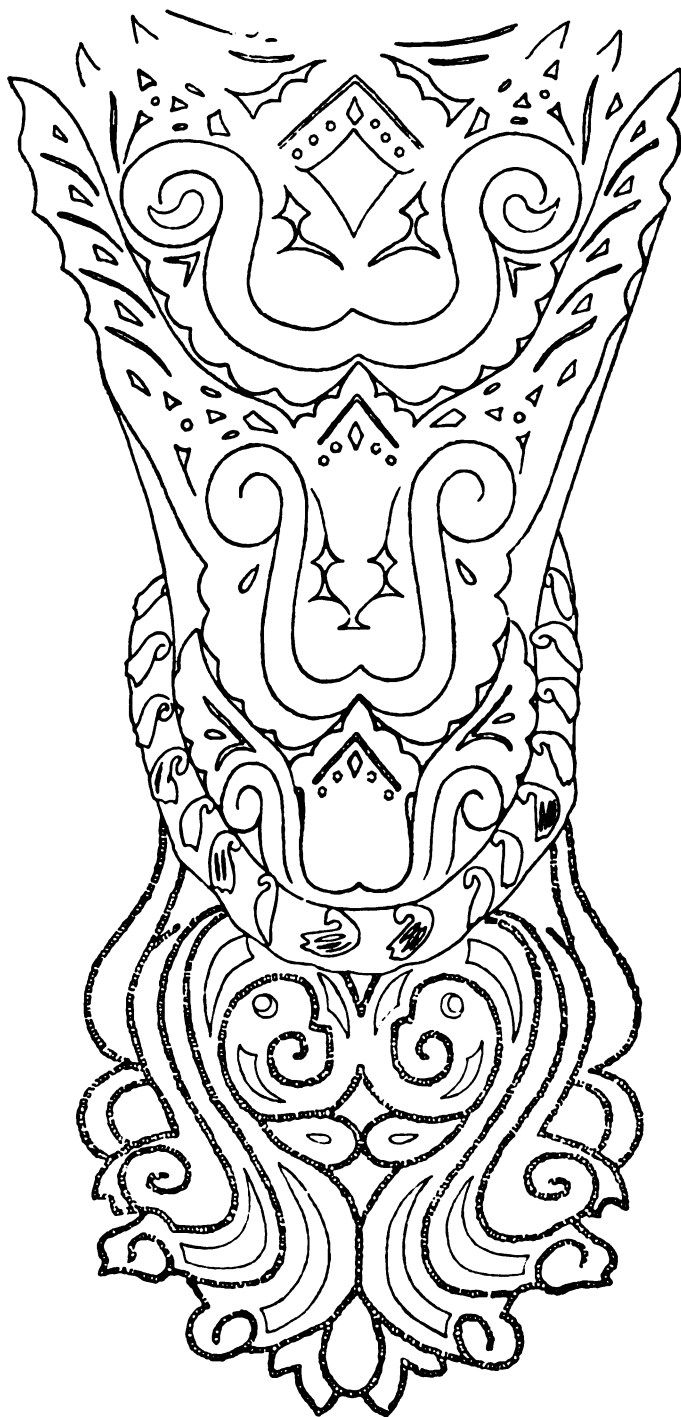


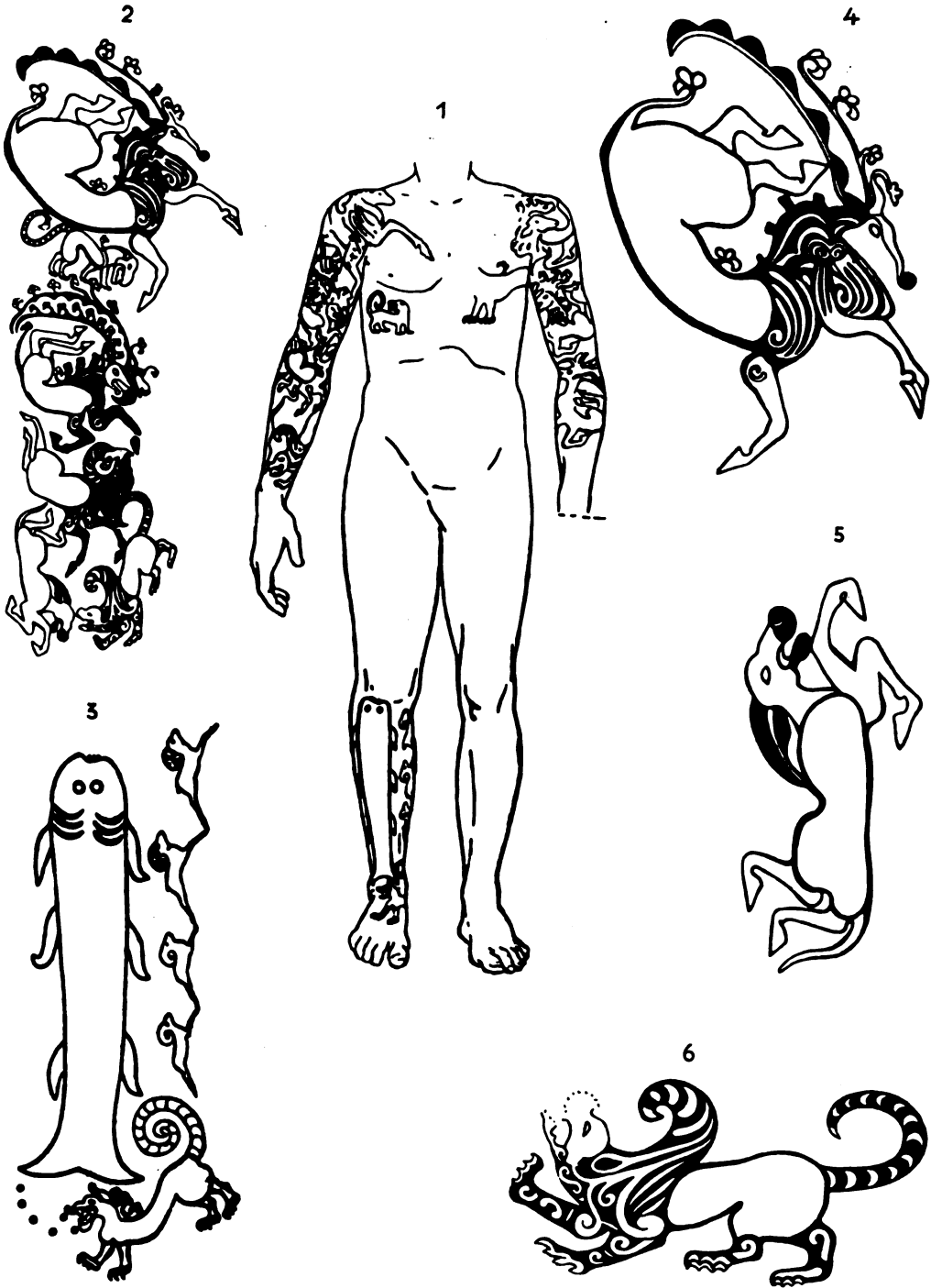
1-7 Kurat, Spk. p. 167
 8, 16 Kurat, Spk. p. 167
 9-15 : Kurat, Spk. p. 167



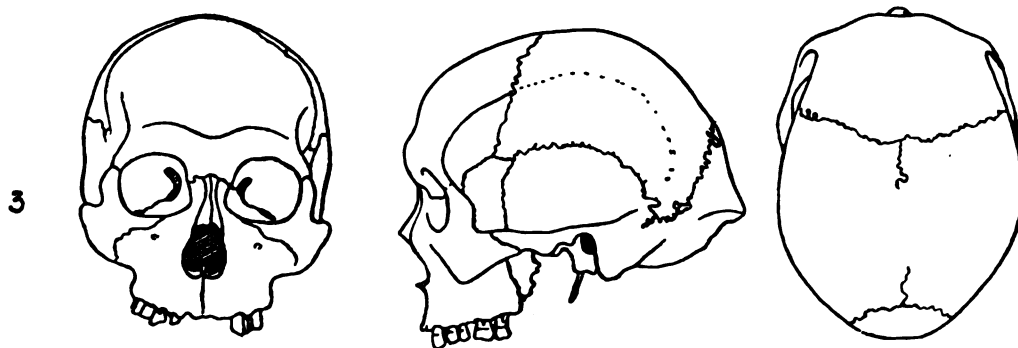
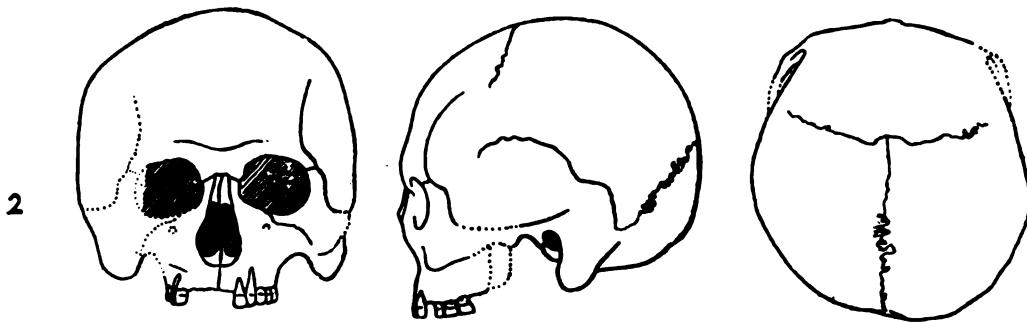
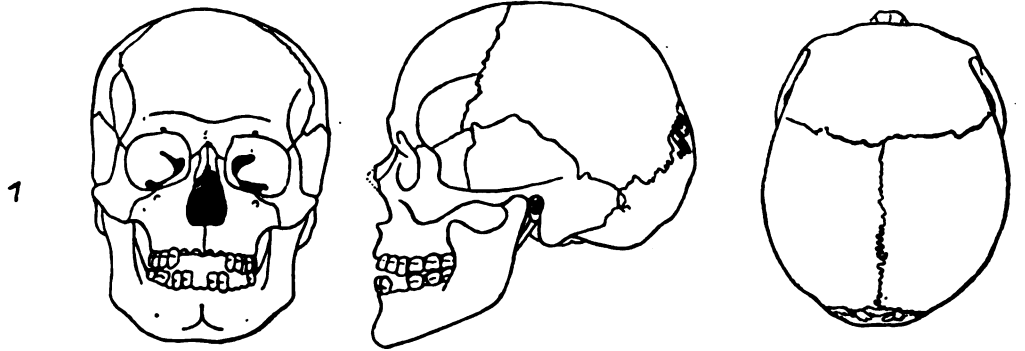
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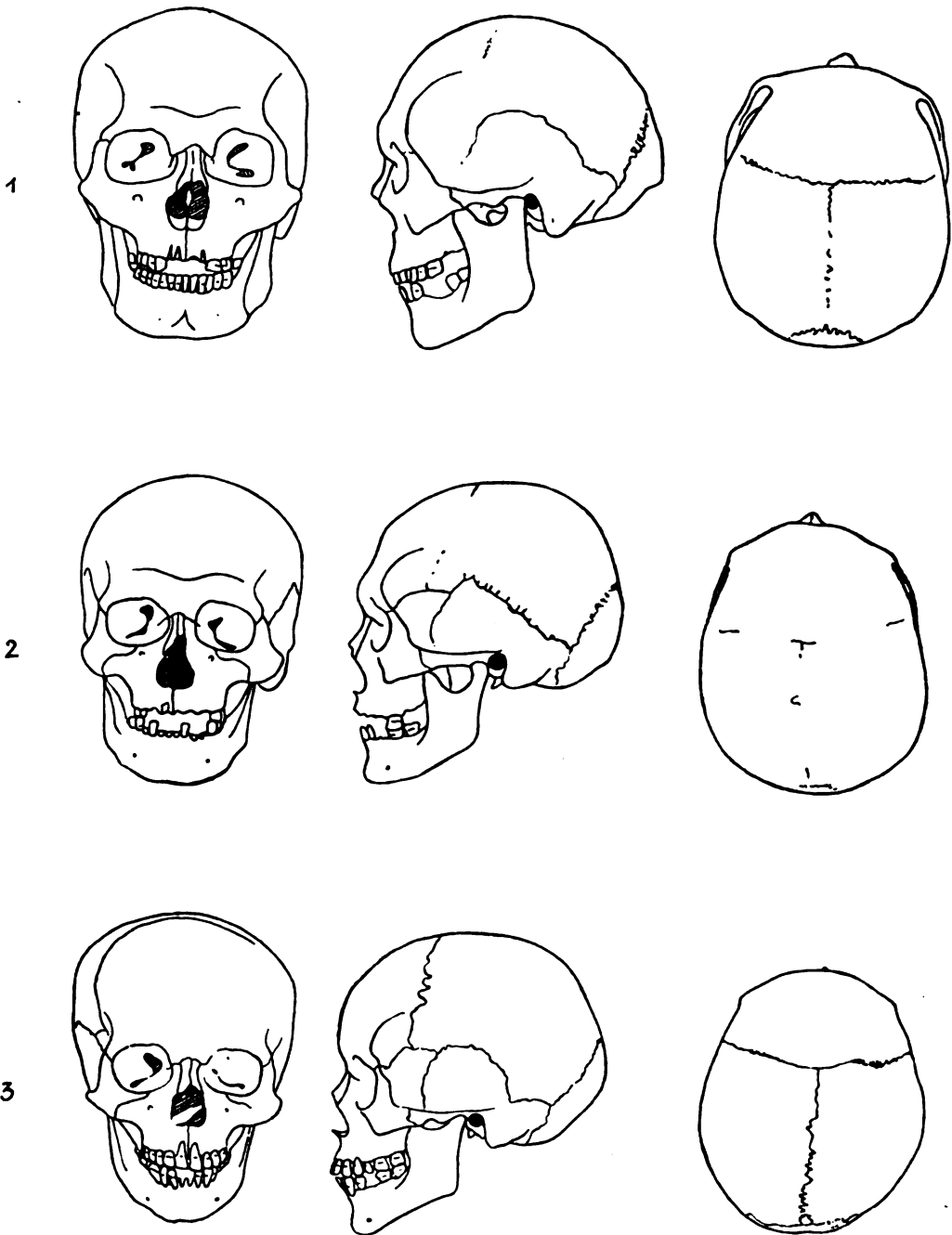


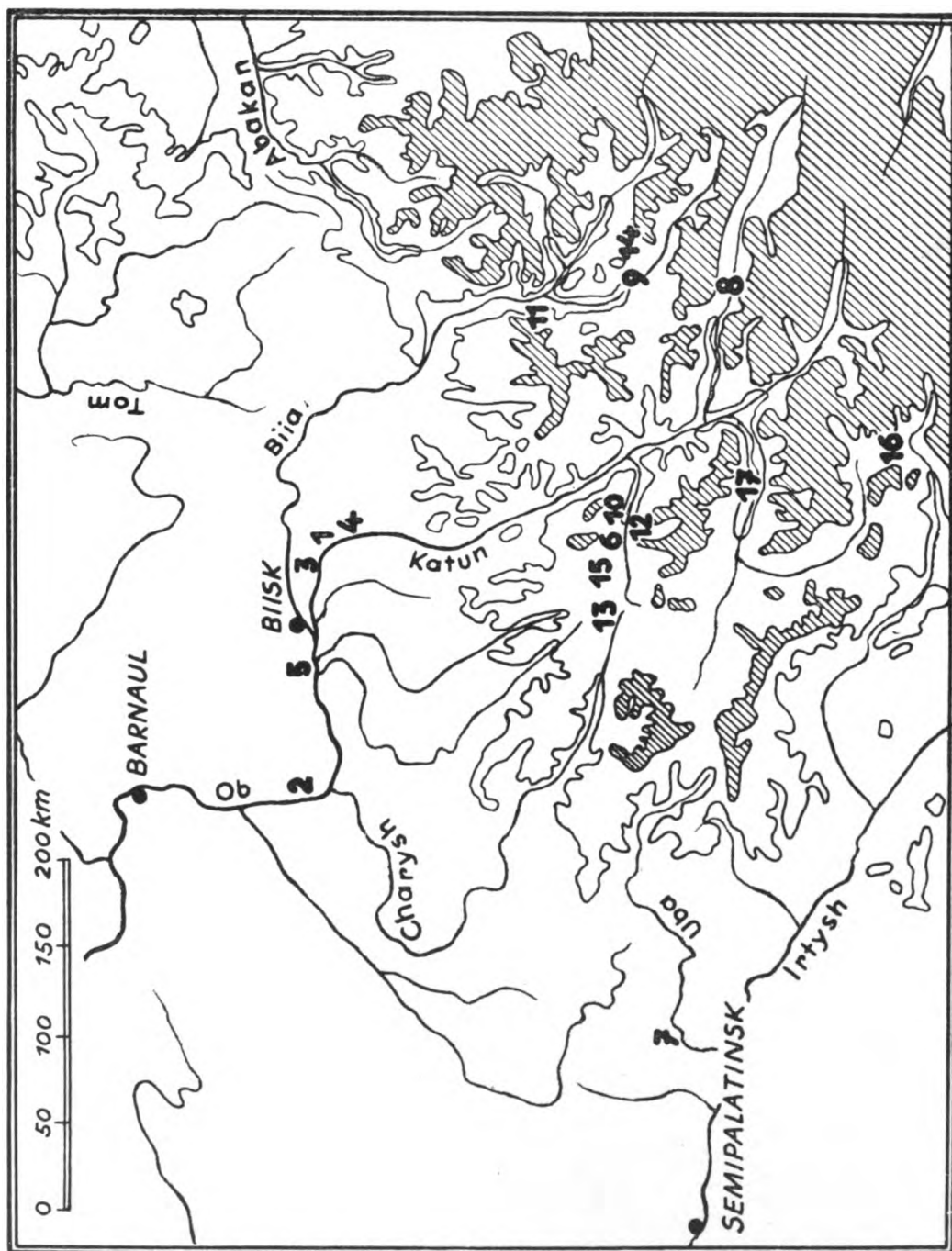






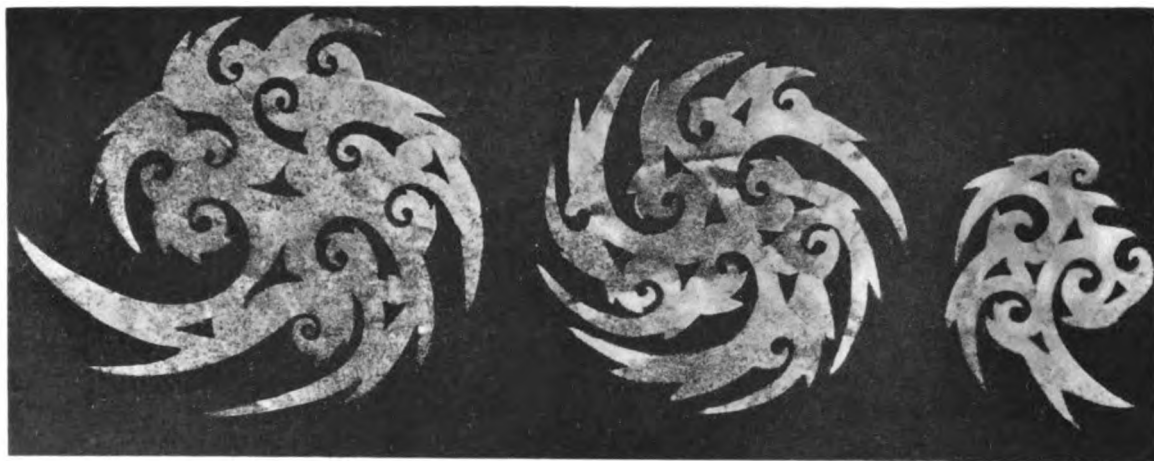






East Ukraine	West Kazakhstan	Khorezm	Semirechia	Altai	Minusinsk	Trans- baikalia	Cis- baikalia
		Early Kelteminar		Pre- Afanasievo	Finds of Bateni		Isakovo Sерово
Pit Graves	Related to Pit Graves			Afanasievo	Afanasievo		Kitoi
Catacombs		Late Kelteminar		Late Afanasievo	Tes Kurgans		Early Glazkovo
Timber Graves	Andronovo- like (Chvalinsk)	Andronovo- like (Tazabagiab)	Andronovo?	Andronovo	Andronovo		Late Glazkovo
	Late Andronovo	Suiargan Amirabad	Karasuk?	Karasuk	Karasuk	Karasuk- like	Shiversk
Scythian	Sauro- matian Sarmatian I	«Habitable Fortresses» «Kangli»	Sakian I Sakian II Usun Cult. Kenkol Gr.	Maiermic	Tagar I Tagar II Tagar III	Stone Tombs I Stone Tombs II Figure Graves Noin Ula	
Sarmatian	Sarmatian II Sarmatian III	Kushan		Pazyryk Culture	Tashtyk		

1



ЯКОНУР

№ 171 ф.

2



3



ЯКОНУР, КУРГАН 8.



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3



4



5



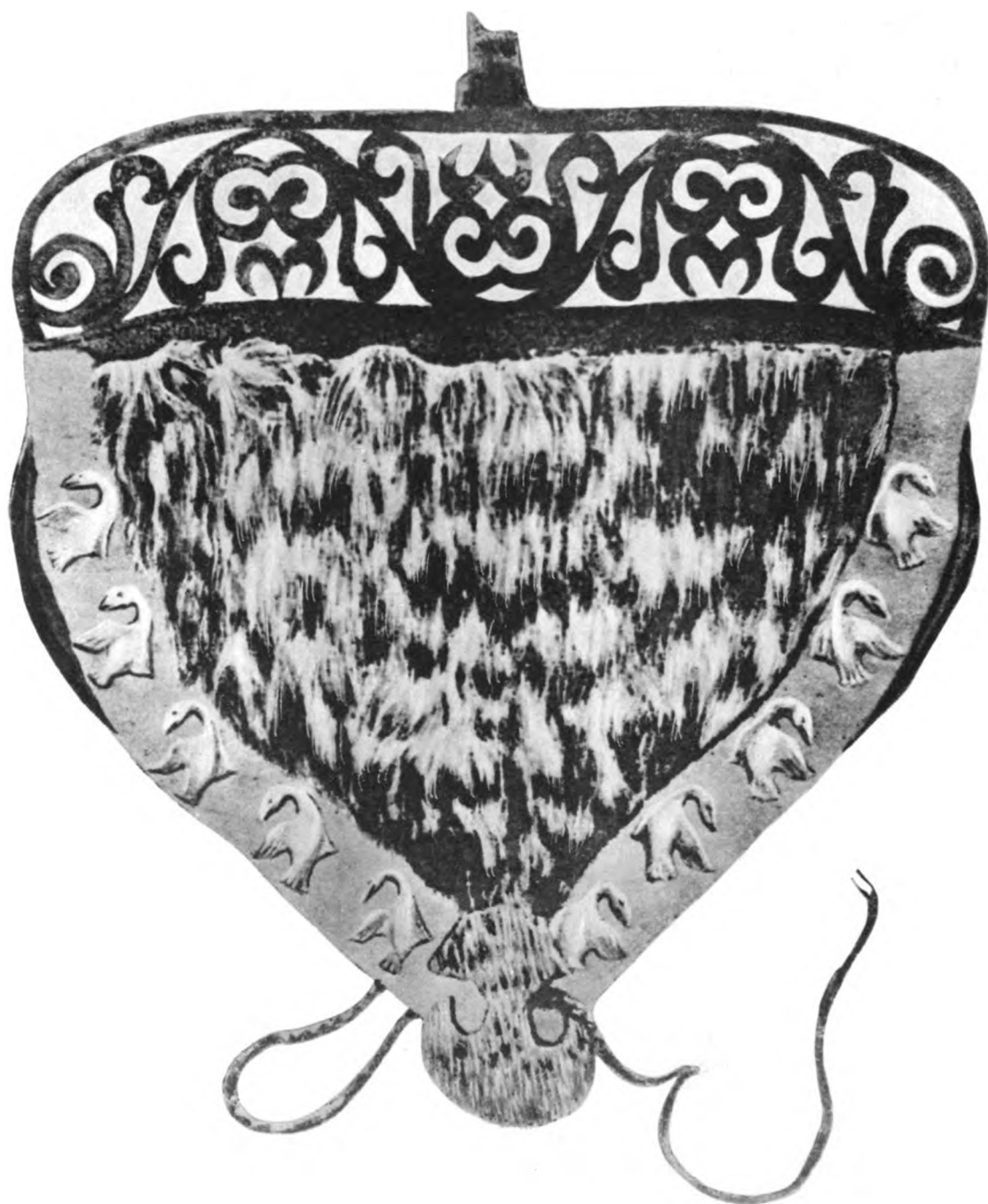
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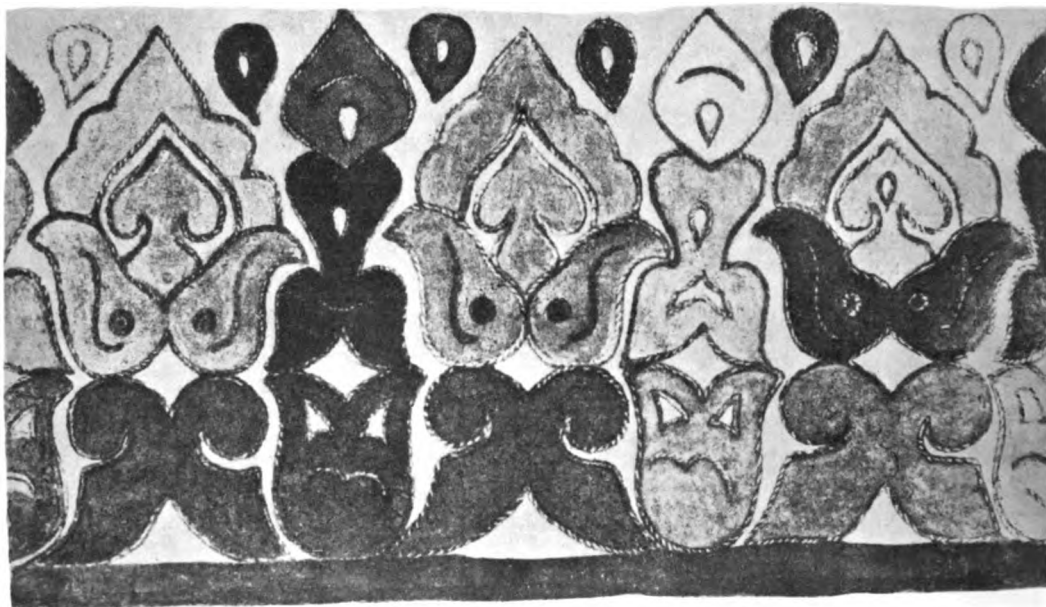
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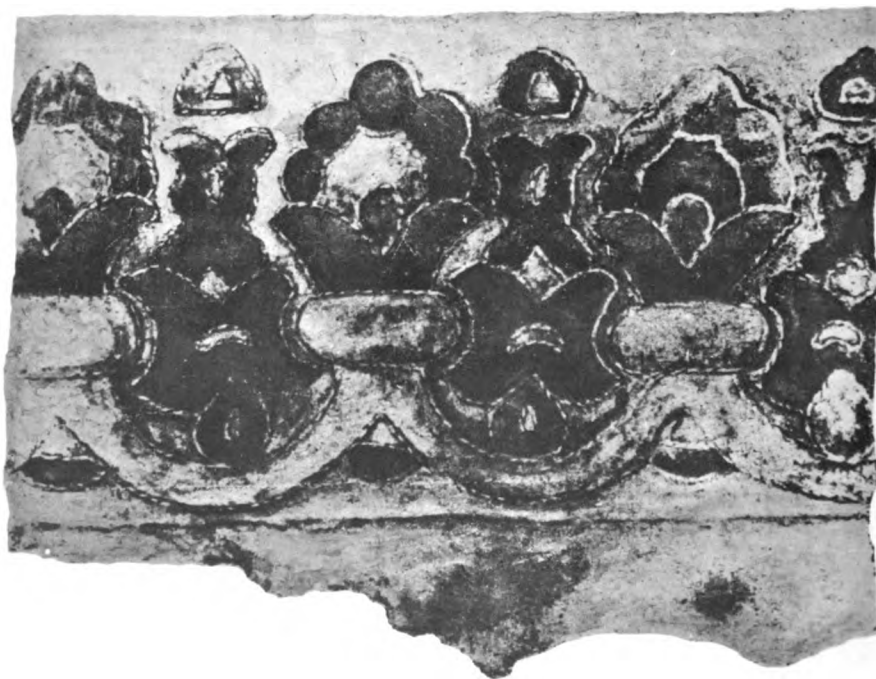


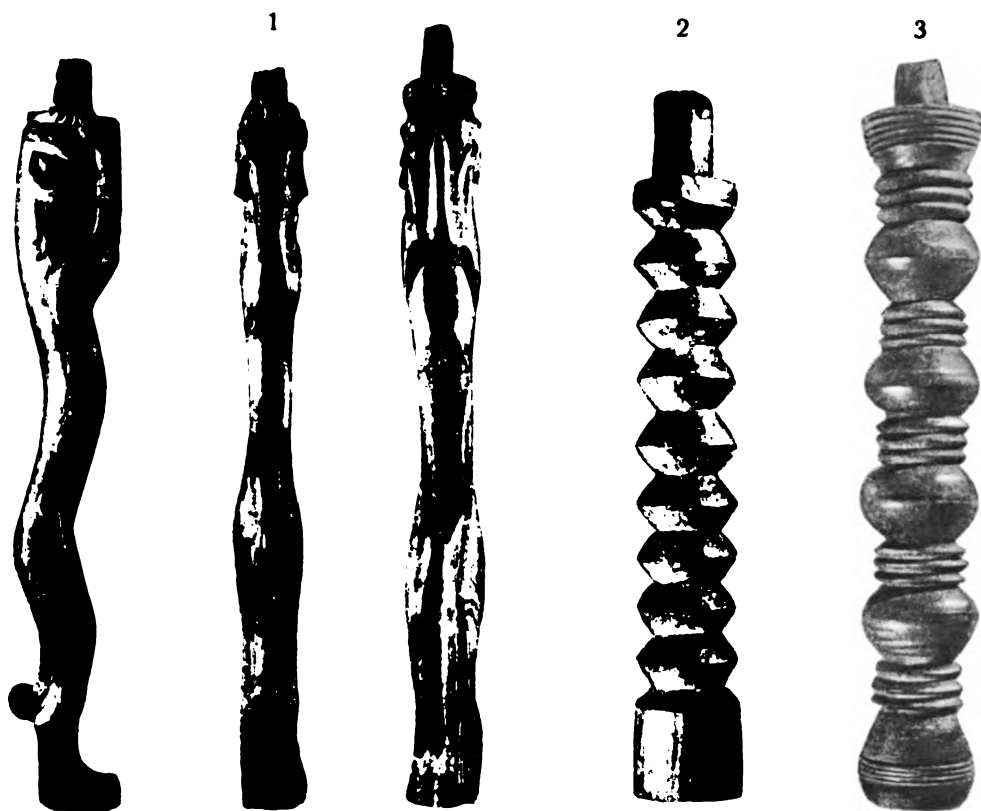


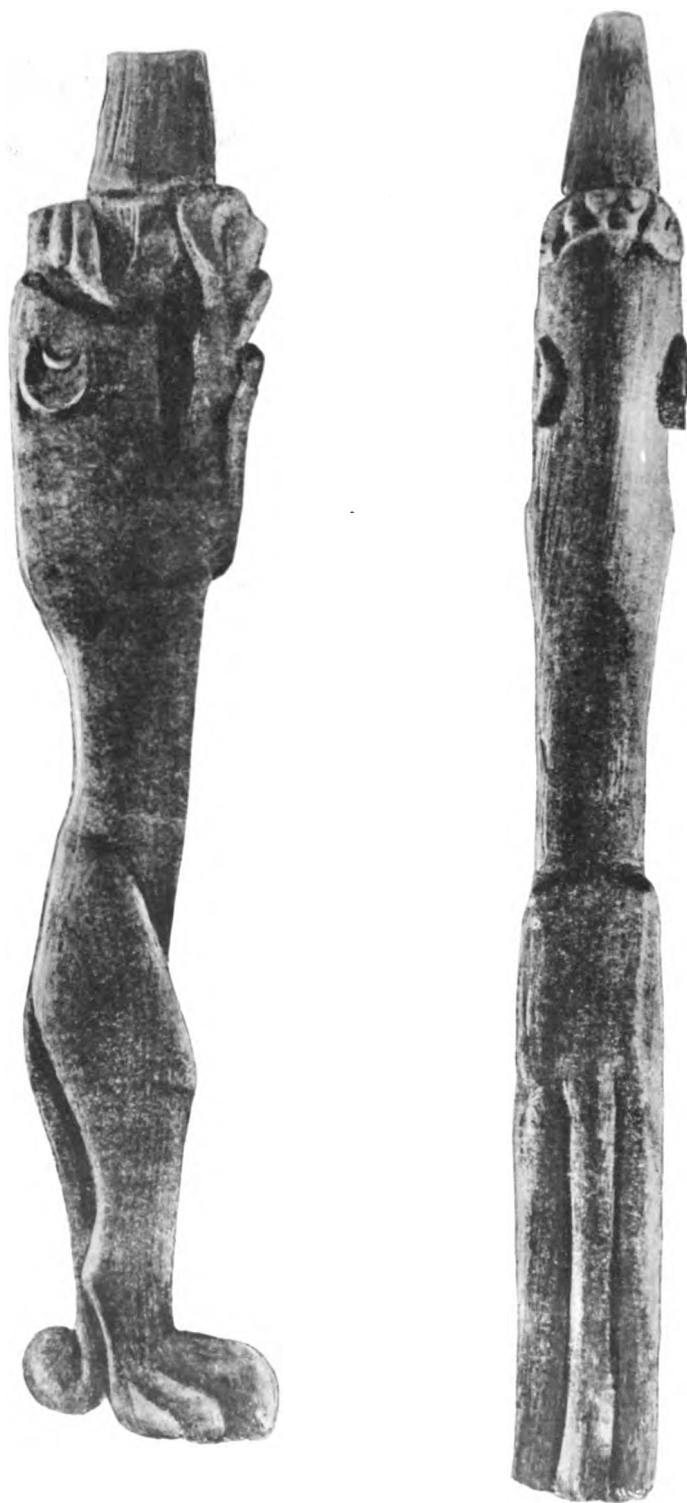
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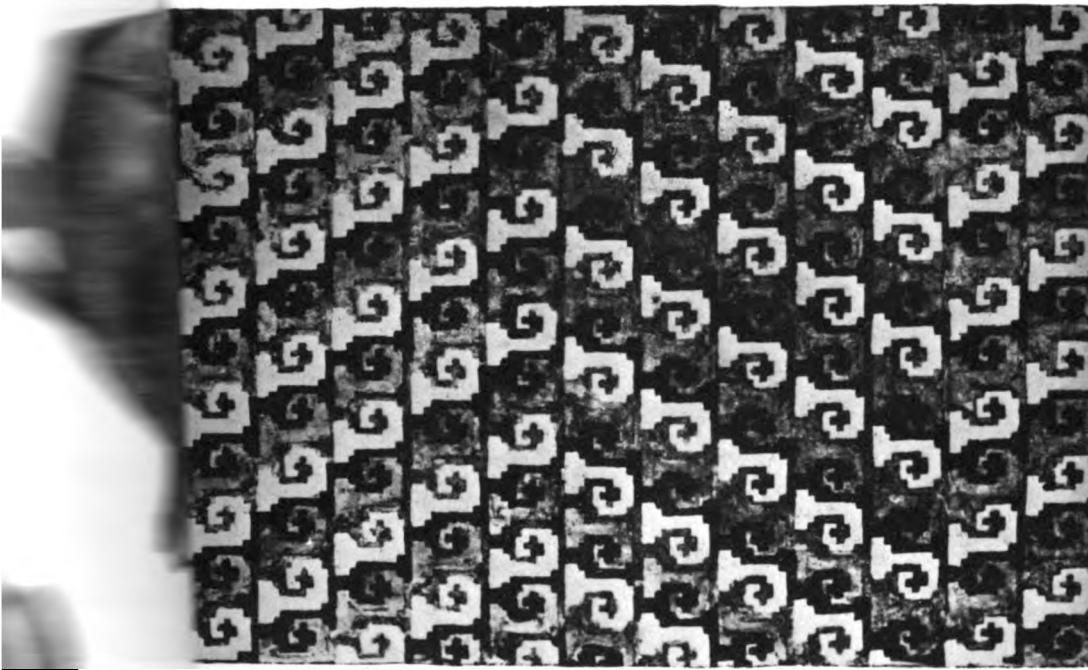
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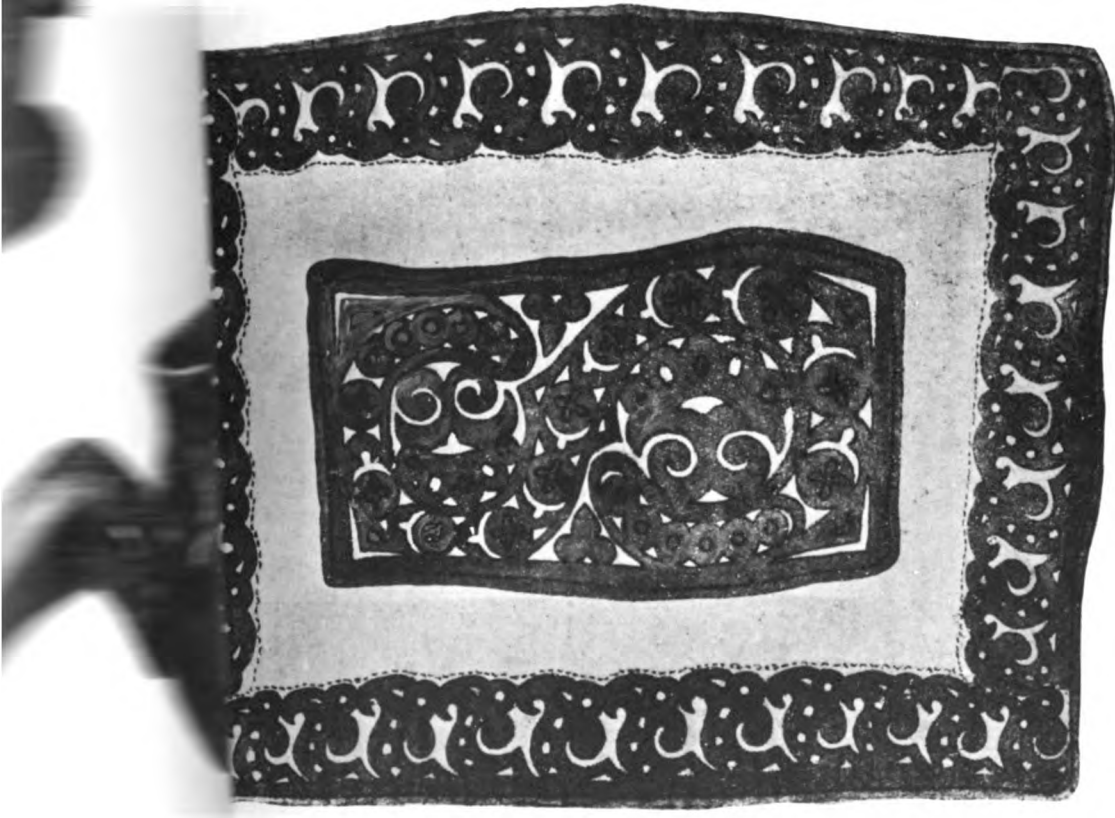
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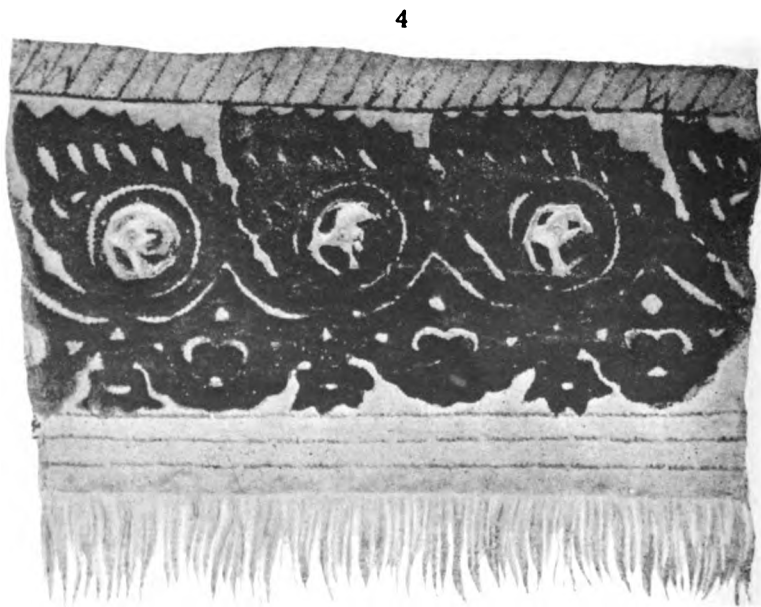
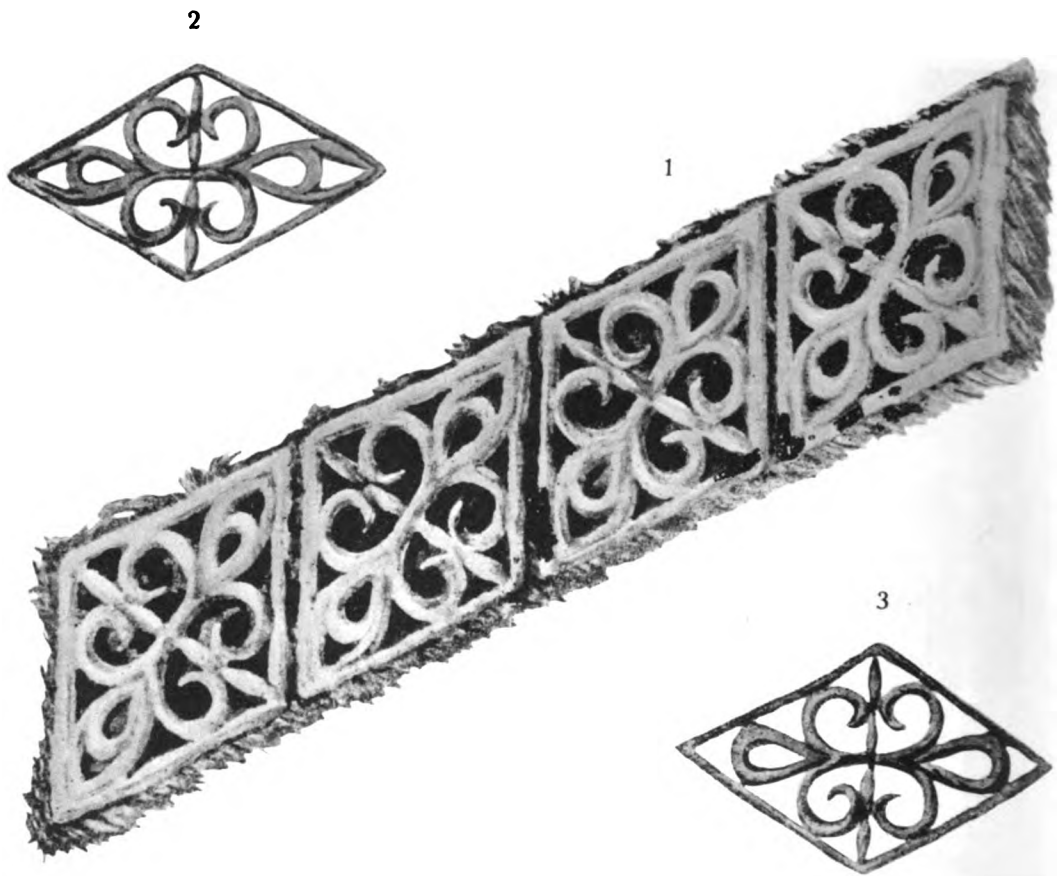


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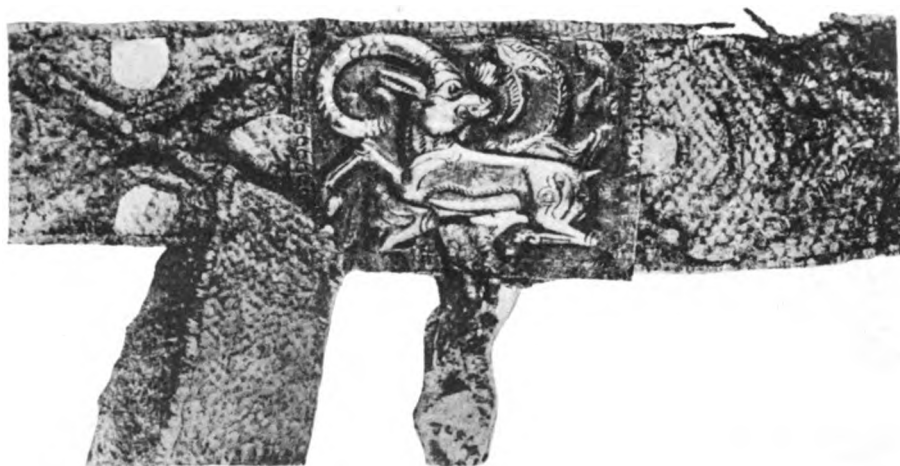
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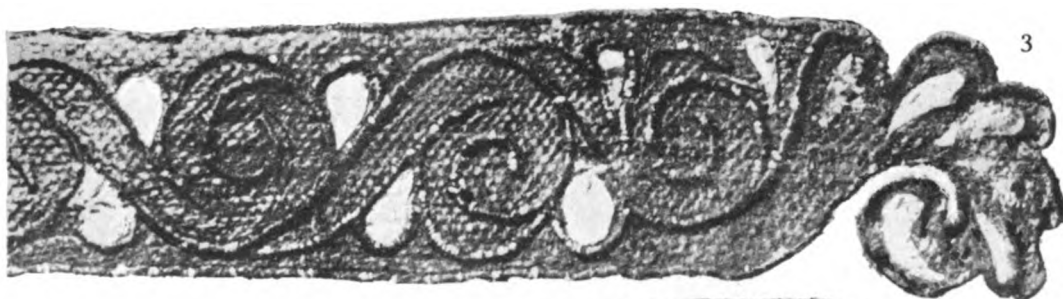




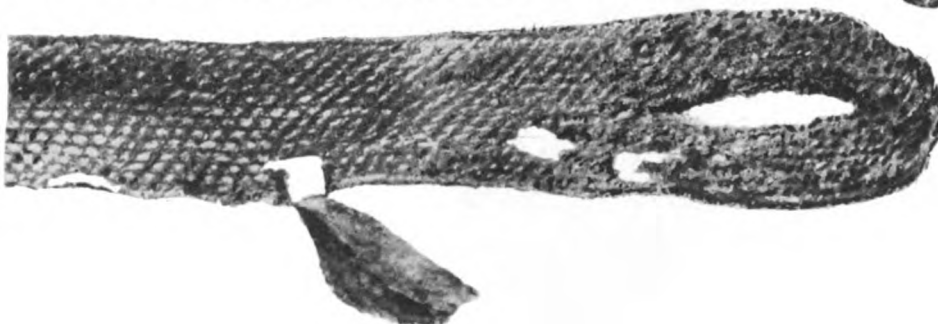
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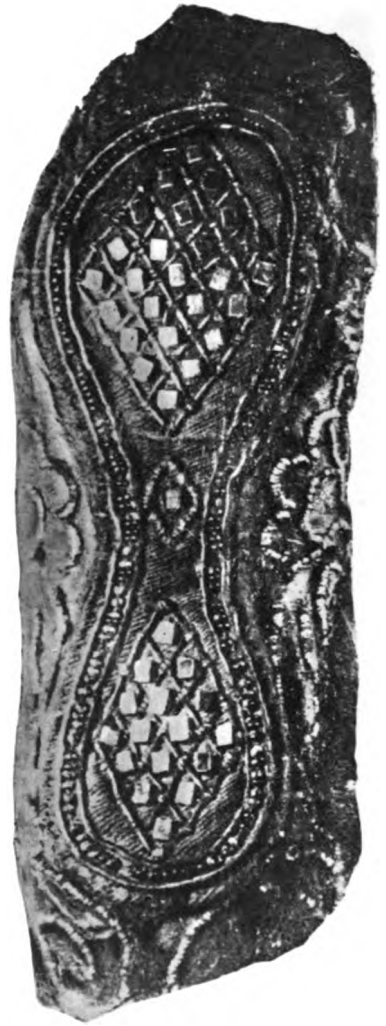


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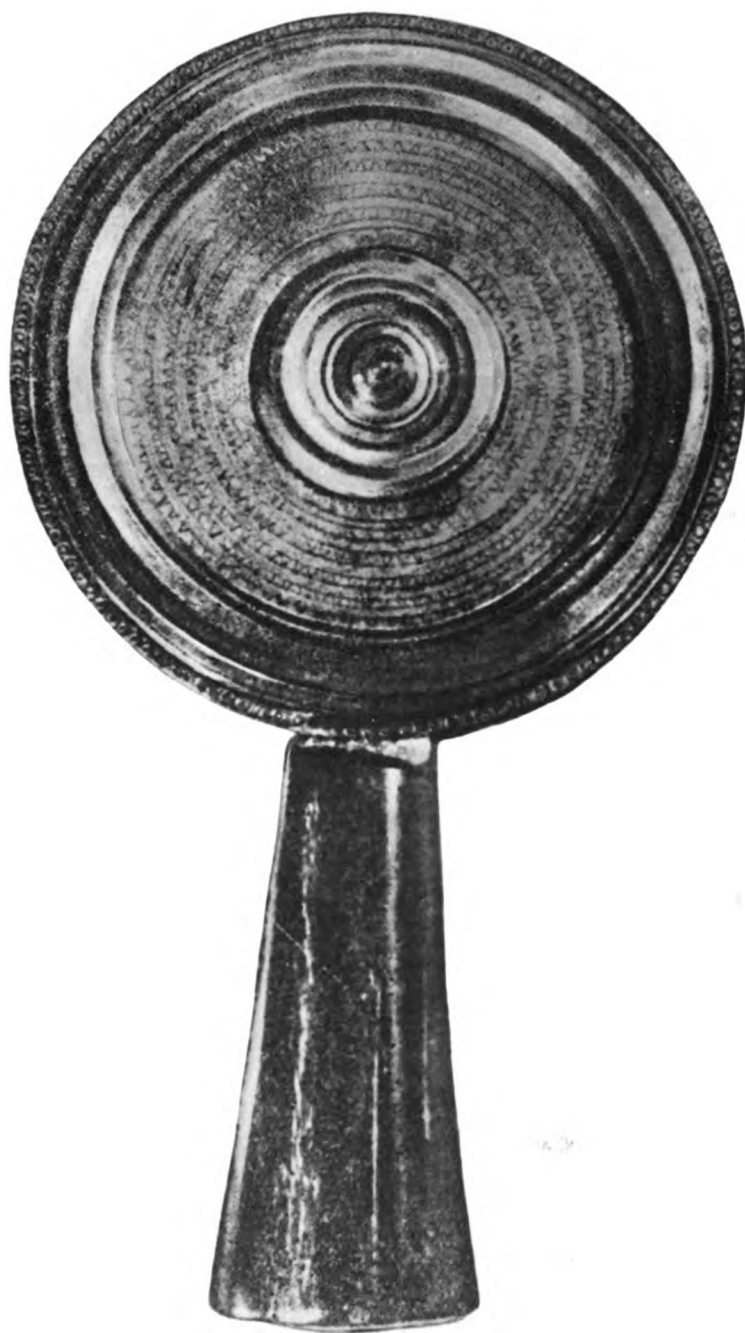


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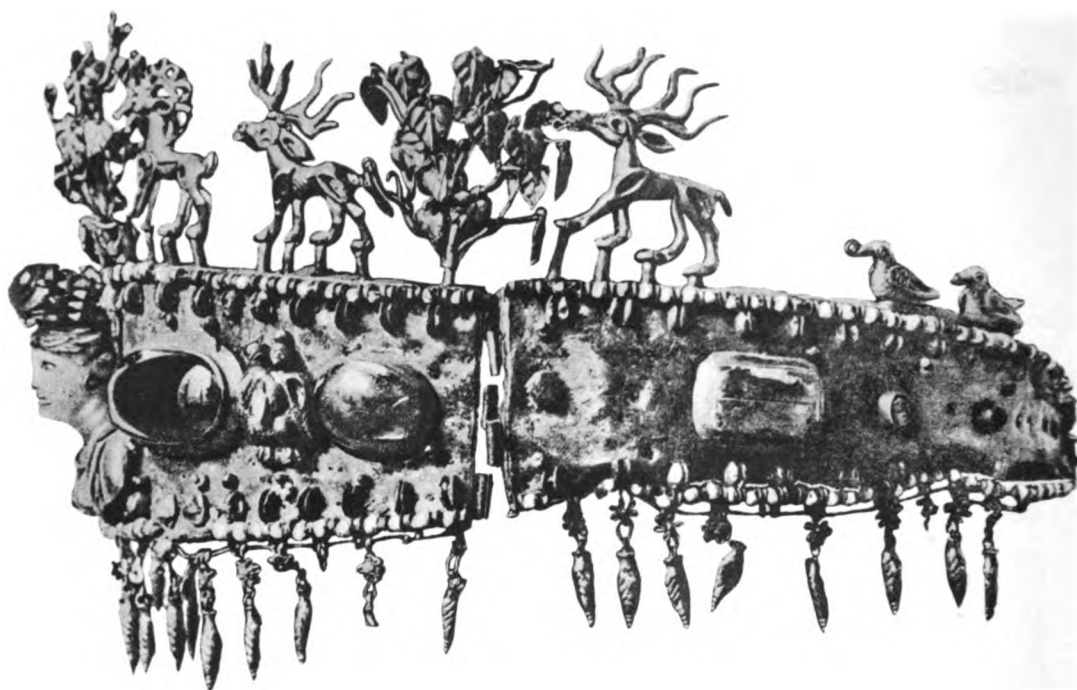


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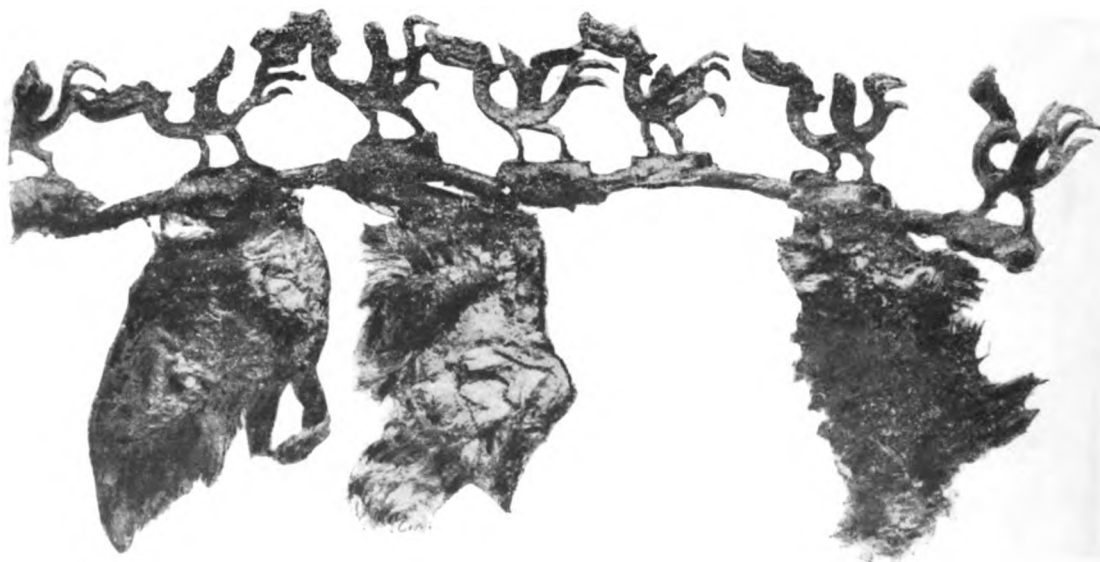




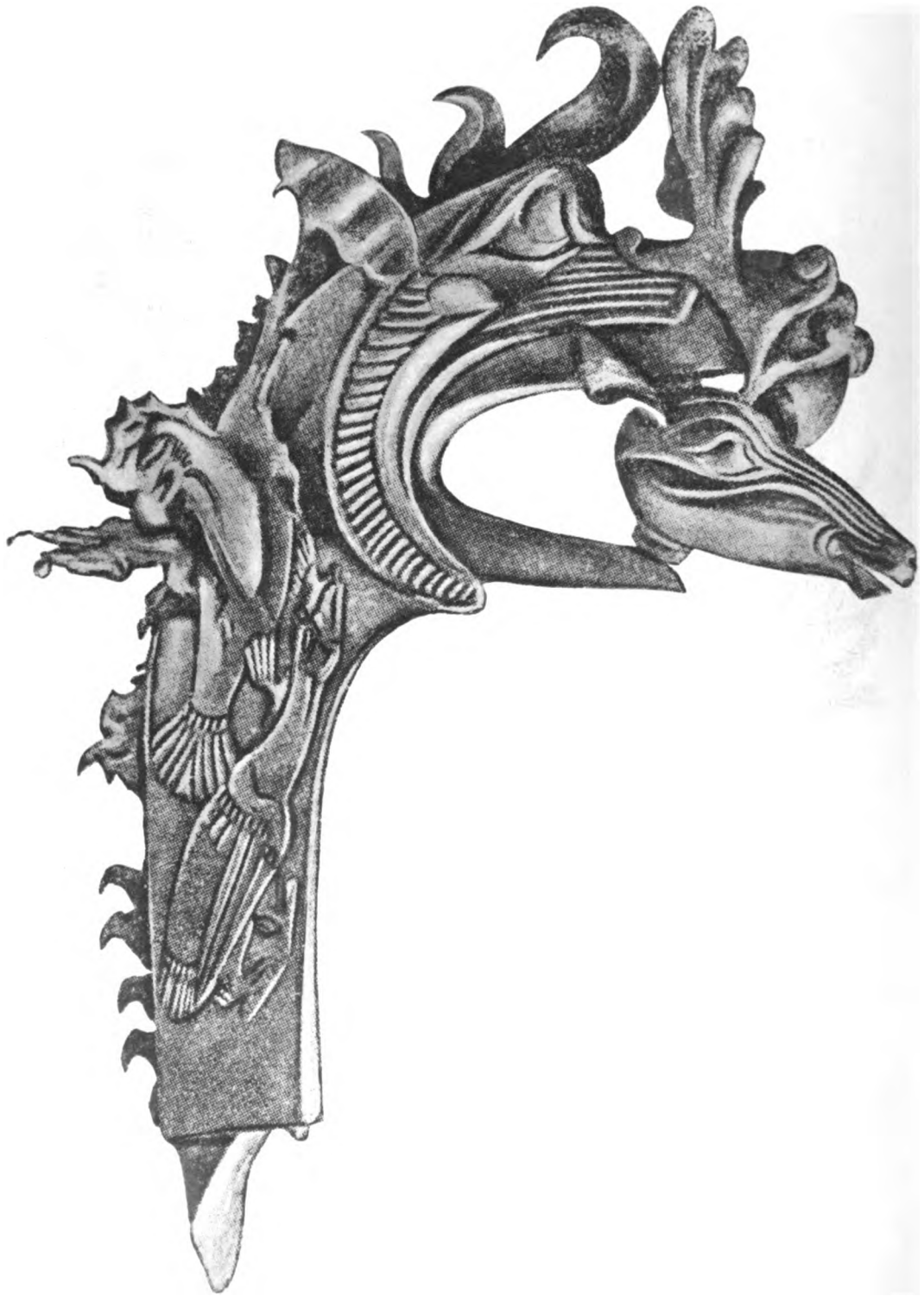
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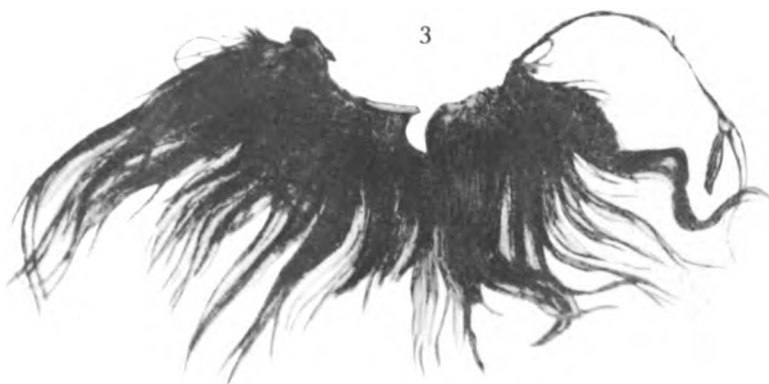
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